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APRIL 1897.

# THE OPHTHALMIC RECORD

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The May number of the OPHTHALMIC RECORD will contain (among others) an original paper by Dr. Robert Sattler, "Sarcoma of the Orbit;" one by Dr. George T. Stevens, "Examinations by the Tropometer and some of the Phenomena Observed;" one by Dr. C. W. Kollock, "A Case of Optic Nerve Atropy Treated by Inhalations of Nitrite of Amyl;" one by the late Dr. Peter D. Keyser on "Subjective Visual Sensations." There will also appear reviews of the most recent contributions to Ophthalmology published here and abroad, book notices, editorials by prominent Ophthalmologists, society reports and miscellaneous items of interest.

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The RECORD particularly desires short, practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles when accepted are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal and proofs for correction will be sent to authors when desired. Reprints with covers are furnished at cost. One hundred of these will be presented to authors *gratis* when a request for them is written on the original manuscript. The RECORD will be issued monthly and each number will contain about 54 pages of reading matter.

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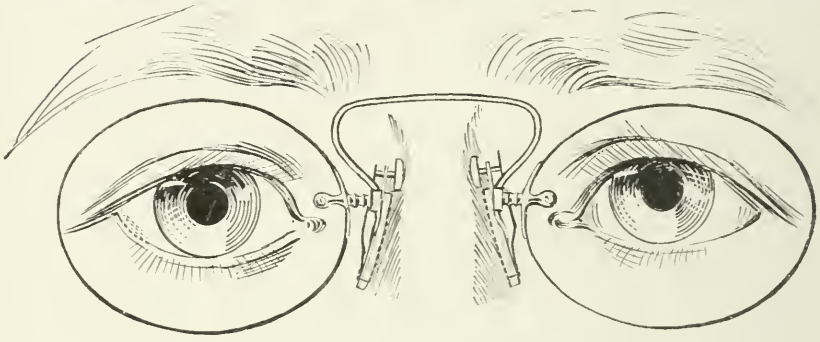

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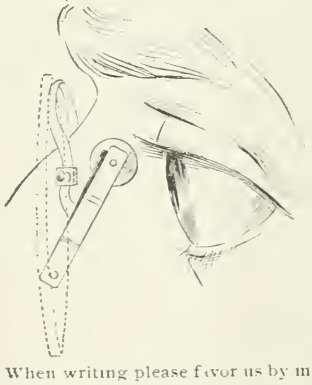

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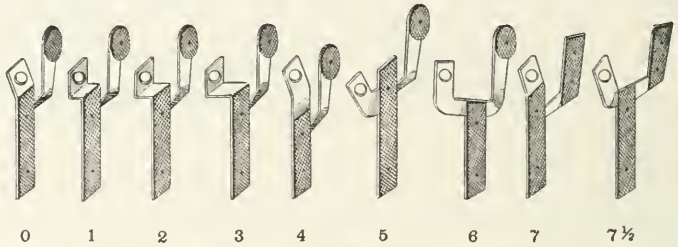

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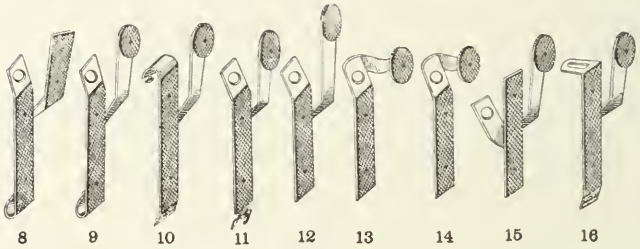

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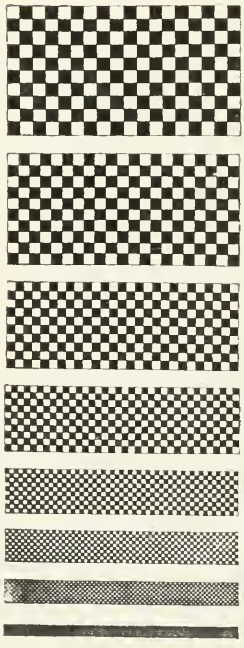

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THE

# OPHTHALMIC RECORD

VOL. VI. CHICAGO, APRIL, 1897. NO. 4, NEW SERIES.

## ORIGINAL ARTICLES.

### A CASE OF REPARATION FROM EXTENSIVE INJURY INVOLVING THE INNER ANGLE OF THE EYELIDS*.

By CHARLES A. OLIVER, A.M., M.D.,

One of the Attending Surgeons to the Wills' Eye Hospital; one of the Ophthalmic Surgeons to the Philadelphia Hospital, etc.

On the 9th of December, 1896, B. F., a 27 year old boiler-maker, was referred to the Wills' Eye Hospital from the Dispensary Service of the Methodist Episcopal Hospital with the statement that the patient had applied at the Dispensary that morning upon account of "having been struck in the left eye with a piece of red-hot steel." The note stated that most of the fragments had been removed, the eye washed with boric acid solution and a few drops of cocain and atropin instilled.

The patient, who was admitted into the hospital wards by the resident surgeon, Dr. James C. Bloomfield, at 12 m., I found in bed at 3 p. m., he having had the conjunctival sac freely irrigated, atropin instilled once, and cold compresses applied continuously.

Superficial examination showed that there was a rathar extensive burn of the nasal conjunctiva and two short curvilinear cuts extending partly through the upper and lower lids; the inner cul de sac of the conjunctival membrane being torn loose and protruding through the palpebral fissure.

Close inspection by the aid of a spring speculum and oblique light revealed that not only were the eyelids torn apart at the inner canthus, but that there was a deep sulcus of burnt tissue extending almost one and one-half centimeters directly back and in into the orbit. The eyeball itself was uninjured.

* Read before the February, 1897, meeting of the Section on Ophthalmology of the College of Physicians of Philadelphia.

Two days later, whilst the patient was under the anæsthetic influence of ether and with the assistance of Dr. George C. Harlan, I removed numerous pieces of loose and adherent charred dirt from the deeper and previously unexposed portions of the wound. The opening into the sulcus was covered by carefully stitching the torn conjunctiva into position by a series of fine and delicate sutures. The free edges of the breaks in the upper and lower lids were sewed together and the inner extremities of the two lids were reunited by a deeply placed strong silk thread. The wound was dressed in the ordinary antiseptic way.

In four days time the sutures were removed. The conjunctival cul de sac to the inner side was thoroughly restored, and the lids were in proper position. The orbicularis possessed full action and the globe had free motion. The ice compresses were ordered to be used for but ten or fifteen minutes three times daily and the patient was allowed out of bed.

One week after the accident, there being but few marks of any traumatism, the patient was permitted to return to his home.

Seven weeks later, with the exception of some faint scar-tissue in the skin of the side of the nose surrounding the inner canthus and a slight double line of symblepharon which only could be recognized when the eyeball was rotated far to the left, with two almost imperceptible cicatrices extending through the two canaliculi, nothing abnormal could be noticed.

A troublesome stillicidium which is provoked only by exposure to strong draughts of wind, can, should it become more pronounced, be remedied by extirpation of the lachrymal gland.

Remarks.—The case is presented as illustrating how so gross an accident, produced in such a remarkable way, has, by prompt and judicious treatment, left but little or no disturbing sequelæ.

---

## REPORT OF A CASE OF PERSISTENT RETINAL IMPRESSION FOLLOWING THE USE OF THE SEXTANT.

By FREDERICK T. ROGERS, M.D.,
Providence, R. I.

ILLUSTRATED.

Numerous cases have been reported of persistent images after looking at an eclipse or some brightly illuminated object, but they are usually of short duration. The following case is interesting from the fact that the patient, an unusually bright student, was able to graphically describe its appearance in detail, and that the image persisted practically unchanged for ten months afterwards.

E. R., aged 24, female, student in Brown University, on February 21, 1896, consulted me for a blur over the left eye, and gave the following history:

On February 11, when taking an observation of the sun with the sextant, she neglected to put up the smoked glass and, although at the time she experienced no other inconvenience than a momentary glare from looking at the sun, has had

since then a distinct image of the sun in the center of the field of the left eye. She described it to me as follows:—"On the first day that I noticed the spot I could see it as well with the eye closed as when open, but after the third or fourth day I could only see it when looking at the light or some brightly illuminated object.

"The first sensation was that of semicircles of light revolving rapidly about a darker center."

She drew the following diagram as illustrating the effect:

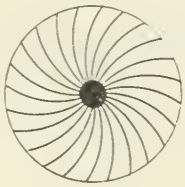

Fig. 1.

"After a few days the periphery of the image was of a purplish hue and the whole seemed in rapid motion till, as if tired of looking at it, it became hazy and blurred, with a distinct lavender-colored center and purple edge."

There was no history of previous trouble with the eyes and she seemed to think that up to this time she had as good vision as anyone and had been able to pursue her studies without inconvenience. There was no objective sign of inflammation of the eye or its appendages. The vision was:

R. V. = 0.3 with some letters in 0.4 and 0.5.

L. V. = 0.1 +.

Javal showed an astigmatism of 3.50 in the right eye and 3.0 in the left, both with the rule; and retinoscopy, a mixed astigmatism as follows:

R. +1.50 cyl. ax. 90° ⊃ — 2.0 cyl. ax. 180°.

L. +1.0 cyl. ax. 90° ⊃ — 2.50 cyl. ax. 180°.

The ophthalmoscopic examination was made with a dilated pupil and showed a distinct red zone of 2 mm. in diameter surrounding the macula of the left eye entirely dissimilar to the appearance of the right eye, and a little below and toward the disc is a spot of brownish discoloration irregular in shape and from 5 to 6 mm. in diameter. There is no alteration in the fundus other than these and no apparent disturbance of the vessels or disc.

The use of the eyes was prohibited and scopolamin ordered to be instilled three times a day, protecting the eyes by rather dark glasses.

A few days later, while under the influence of the cycloplegic, the vision was tested as follows:

R. V. = 0.3 + 1.0 cyl. ax. 90° ⊃ —2.0 cyl. ax. 180° = 1.0.

L. V. = 0.1+ + 1.0 cyl. ax. 90° ⊃ —2.50 cyl ax. 180° improves so that some letters on the ends of the lines are seen in 0.5 and 0.6, but the central letters are not seen on direct fixation.

With a dilated pupil the subjective appearance of the spot is changed. There is a distinct six-sided lavender figure as a center and, on gazing at it intently for a few seconds, a flash or point of light comes on the lower edge and extends with

quivering motion around the center till the whole becomes blurred. After closing the eyes for a moment this is repeated upon reopening them.

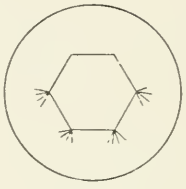

Fig 2

The field is unrestricted in the periphery with a sharp-defined central scotoma.

Without faith in the efficacy of drugs, she was placed upon increasing doses of Kal. Iodid. and, the use of the eyes being prohibited, was kept under the influence of the cycloplegic.

From this till March 24, there was no change in the ophthalmoscopic appearance save that the red zone gradually faded and the spot of discoloration disappeared. On this date, finding no change in the subjective symptoms and yielding to her importunities to allow her to resume her studies, the scopolamin was discontinued and the following glass ordered :

O. D. + 0.50 ⌒ — 2.50 cyl. ax. 180°. V. = 1.0.

O. S. + 0.50 ⌒ — 1.75 cyl. ax. 180°. V. = terminal letters in 0.5.

April 17, she reported that, while she could see much better with the glasses, she suffered severely from headaches and that the spot before the left eye, though slightly fainter, was otherwise unchanged.

October 24, the appearance of the image was the same. The headaches were, however, worse with the resumption of her studies and she believed she could read without her glasses with greater comfort, although for class room work they were quite necessary. She was allowed to discontinue their use for close work and the following ordered for distant vision :

O. D. — 2.0 cyl. ax. 180.

O. S. — 1.75 cyl. ax. 180°.

On November 7, she reports that the headaches have ceased and that there is no change in the visual image.

---

Tri-State Medical Society of Iowa, Illinois, and Missouri.—The fifth annual meeting of this society occured in St. Louis, April 6, 7, and 8, 1897. Dr. Joseph Price of Philadelphia held the Surgical Clinic, Dr. James T. Whittaker of Cincinnati the Medical Clinic, Dr. Dudley Reynolds the Ophthalmic Clinic. Dr. G. Frank Lydston of Chicago entertained the members with an original story during one of the evening sessions.

# FUNCTIONAL DISEASES OF THE OPTIC NERVE AND RETINA.

By ROBERT W. MILLER, M D ,
Los Angeles, Cal.

The ailments to which reference is made in the above title are not embraced under this head, nor grouped together in any work upon ophthalmology with which I am familiar, probably for the reason that cases are found bearing the same name, some of which are functional, others organic, and still others occupying a middle ground. The work of grouping or classifying and treating them in a paper of the length allotted me can be but very imperfectly done; yet an effort will be made to furnish a few thoughts that may not be altogether lacking in interest and practical value.

In the light of the results of modern pathological and ophthalmoscopic research, it seems that the term amaurosis, formerly used to designate blindness either partial or total from some obscure cause, ought to be discarded. Impairment or loss of vision should be used instead. Such terms as "uraemic," "amaurosis," etc., so common in text books are not sufficiently definite and may well be dispensed with.

"Amblyopia" is a convenient word used to designate subnormal acuteness of vision dependent neither upon visible organic lesion nor faulty refractive media.

In the use of the words "hemeralopia" and "nyctalopia," the former will be employed to designate day-vision and night-blindness and the latter to designate night-vision and day-blindness.

Since the eye must be regarded physiologically as the expanded prolongation of the optic nerve, we find it convenient to deal much of the time with diseases of the nerve and retina as essentially one disease.

A somewhat rare condition is *spasm of the retinal arteries*, epilepsy of the retina or megrim. In its description I cannot do better than quote from Noyes:—"In consequence of vaso-motor irritation the retinal arteries may be firmly contracted, and arrest completely the circulation. Irritation of the sympathetic in the neck, causes their contraction, while extirpation of the superior cervical ganglion induces enlargement of the vessels. The suspension of the circulation causes partial or total blindness in one or both eyes.

A so-called blind headache is a mild form of the disorder, and the vessels of the brain, as well as the eye, may be affected. The visual disturbance may be the most conspicuous phenomenon and should not

be regarded as of serious moment." However true the last statement may be, the patient sometimes manifests not a little concern and annoyance.

I am not aware that any one has made a study of its possible pathological connection, by heredity or otherwise, with the grosser manifestations of epilepsy.

Albuminuric and diabetic amblyopias are apt to be associated with organic, cerebral and retinal change.

Again, nyctalopia, in the sense of seeing best at night, is apt to be symptomatic of hyperæmia of the retina. Its occurrence is explained by the existence of a central scotoma (or cloud). The latter in front of the eye causes its minimum of embarrassment to vision, when the light is dim and as a result the pupil larger and hence admitting a larger amount of light to fall upon the peripheral portions of the retina.

Hemeralopia or day-vision is often associated with and hence becomes a frequent symptom of pigment degeneration of the retina.

It was observed as a symptom of this disease, as we are told in pre-ophthalmoscopic days. The diagnosis was presumably made by *post-mortem*.

Hemeralopia is often dependent upon impaired nutrition, long-continued exposure to strong light, glare, climatic vicissitudes, etc. I have observed it in some patients in whose general condition I could discern little or nothing pathological, but were from a general appearance in good health.

These cases were quite the exception, most of the patients being at least the subjects of overwork or worry.

The Amblyopia of Squint is an important affection which we frequently find opportunity to observe and study. It is sometimes due to imperfect development of the optic nerve and retina or the visual centers, while in other cases the explanation for the squint is to be found in an error of refraction or opacities of one or more of the refractive media.

Other functional disturbances are those due to shock, traumatism to the eye or contiguous part, anaesthesia from the inhalation of chloroform, ether, etc., certain drugs taken internally, and, as I believe, a transitory impairment of function which occasionally lowers vision in quite a perceptible degree, caused by the installation of a solution of cocain into the eye. I had one patient who asserted that he could not see to get about for ten or twelve hours after the use of a 5% solution

used to produce mydriasis, but I am persuaded that his fear and anxiety had more to do with the latter period of his impairment of sight than had the drug.

Dyschromatopsia, or difficulty in distinguishing colors, is closely allied to color-blindness, and may be either congenital or due to organic disease of the retina.

Hemianopia, or loss of vision in one-half the visual field, is usually of the lateral variety and homonymous. In some of these cases zigzag flickerings in the defective part of the visual field is observed—*flitting* scotoma. Moreover, flitting scotoma is said by some authors to occur as a manifestation of megrim.

Hyperaesthesia of the retina, is met with tolerable frequency, and in some of its manifestations presents much of interest and importance. Under this head we find certain cases of asthenopia, migraine, scotoma scintillans, some cases of hemianopsia and hallucinations of sight.

Snow-blindness, while it usually involves the conjunctiva and cornea, giving rise to photophobia, is, so far as the immediate and positive loss of sight goes, dependent upon hyperaesthesia of the retina.

Anaesthesia of the retina is sometimes associated with the same cause as hyperaesthesia, and with these conditions as symptoms we find what has been termed *hysterical* anaesthesia and hyperaesthesia of the retina, and hysterical amblyopia. Hyperaesthesia is often dependent in a measure upon some refractive error, which when corrected tends to afford relief. Long-continued residence in dark, illy ventilated apartments, followed by sudden exposure to bright light, is one of its most prolific causes.

Hysterical Amblyopia affords another type of the hysterical manifestations. It must not be inferred that its occurrence is confined to females, as genuine cases are occasionally found in males as well.

From the standpoint of curiosity, some of these cases are rather interesting, and when one of them falls into the hands of the oculist, he is liable to wish more than once that it were some other kind of case, or that the patient had called upon some other than himself, ere his connection with it has terminated. The thought may indeed occur to him, that if he could only convert it into a case of "*fits*," and cure the latter (as the old story goes) how happy would the solution of the problem be.

We must not fail to observe that the sudden attacks of blindness due to acute gastritis, and to outbursts of glaucoma must not be mistaken for any of the varying conditions to which we have referred.

In conclusion we will consider briefly a very important, yet somewhat rare class of ailments known as the TOXIC AMBLYOPIAS.

Temporary blindness, partial or complete, may result from uraemic and other toxic agents in the blood, through direct action upon the optic nerve and retina.

The recent discovery of Samelsohn marks an epoch in the pathology of this class of ailments, as it sheds light on the prognosis and furnishes a basis for more rational theraphy. His discovery shows that in a very large percentage of cases of toxic amblyopia there exists an optic neuritis of that part of the nerve lying along the optic canal, and this serves to explain many of the hitherto inexplicable optic nerve changes.

I had recently under my care a man suffering from amblyopia ex-abusu. He had used both tobacco and alcoholics to excess for a number of years.

V. was reduced to $\frac{20}{30}$ in the right eye and $\frac{20}{40}$ in the left. The pupils were moderately dilated, and reacted very imperfectly to light stimulus. He manifested moderate general fatigue and seemed rather despondent. V. has improved considerably, but remains subnormal.

## OCULAR PALSIES FROM INJURY.

By ALVIN A. HUBBELL, M.D,

Buffalo N. Y.

Professor of Ophthalmology, Medical Department Niagara University,

Case of paralysis of both facial and both abducent nerves :

Henry M———, aged 23, switchman. On August 21st, 1888, while coupling cars loaded with lumber, the young man's head was caught between the ends of the lumber projecting beyond the platforms of the two cars between which he stood. He was afterwards picked up in an unconscious state and taken to the Fitch Accident Hospital. From the hospital memoranda we learn that "a scalp wound was inflicted on the left side of the head, over the occiput, and about two inches in length ; profuse hemorrhage from the ears, nose and mouth, with frequent vomiting of blood ; pulse, 54 ; respiration not disturbed." The diagnosis was, "fracture of the base of the skull."

On the following day, August 22nd, he was transferred to the Emergency Hospital, and placed under the care of Dr. C. M. Daniels, surgeon to the Erie railroad. He was, at this time, in a semi-conscious state, from which he could be

aroused with difficulty. His pulse was about 60, and temperature 90° F. (?) On the left side of the head, just above and behind the ear, there was a semi-circular wound of the scalp, of considerable extent, passing from above, downwards and backwards. The wound was said to be four inches long, although at the Fitch Accident Hospital it was noted as being two inches. The bone beneath did not seem be fractured. The wound was sutured with catgut, and dressed anti-septically. On the right side there was slight laceration and much contusion and swelling from above the mastoid process to the clavicle, and the parts were painful and sore. There was some bleeding from both ears, and as the patient became conscious, it was found that the hearing in both was somewhat impaired, most, however, in the right, although ordinary conversation could be heard with ease. There was complete facial paralysis on both sides, every muscle of expression being perfectly immobile, the patient being unable to close the eyelids or move the lips. He could, indeed, "Laugh and cry as from behind a mask," neither smile or frown having any expression in the face. Both right and left abducent nerves (nerves supplying the external recti muscles of the eyeballs) were also completely paralyzed, producing paralytic convergent squint of both eyes. The physiognomy of the patient was thus rendered most peculiar and striking. The vision was a little "hazy" or "smoky," in both eyes, but worse in the right. In the right eye, the accommodation was also impaired and the pupil slightly dilated. The right side of the tongue was dry and rough, and there was total loss of taste, according to the statements of the patient. There was difficulty in swallowing, the muscles of deglutition (probably the palatal muscles) on the right side appearing to be most impaired in function. The patient succeeded better in the act by turning his head to the left side. Only liquids could be swallowed at first. Paralysis of any other part of the body, either of motion or sensation could not be detected.

The patient, at this time, complained of intense pain in the frontal region of the head, in the eyes, and in the face. This was paroxysmal, coming and going at short intervals.

On the next day, August 23rd, there was slight rise of temperature and increased frequency of pulse, and the parts injured, together with the face, were much swollen, and the face was also very red. The pains continued to be severe, requiring the administration of anodynes.

The subsequent history of the case is one of slow improvement. The pains gradually subsided. The patient was able to swallow semi-solid food on the third day, and soon afterwards solid food. The wounds and contusion healed rapidly. The sense of taste had fully returned within a month after the accident. Hearing improved, and the vision, together with the size and reaction of the right pupil, seemed to be normal after a few weeks. A few days after the patient was brought into the hospital, I was asked to see him, and have had occasion to examine him frequently since, and I found the condition of the eyes and ears as above noted. In addition, careful examination of the fundi of the eyes and of the membrana tympani showed no abnormal appearances whatever.

I have seen the patient recently, and the facial paralysis has so far improved that the patient can close his eyes, and in laughter there is considerable muscular movement about the mouth and nose. The left abducent nerve has nearly, or quite, regained its function, the left eye moving normally in all directions. The right abducent, however, is still partially paralyzed, and the right eye cannot,

therefore, be turned fully to the right. The hearing of the left ear is normal, while that of the right is slightly impaired. Aside from the paralysis of the facial and abducent nerves which remains, and the impaired hearing of the right ear, the patient feels as well as before the accident.

Such a combination of symptoms as appears in this case must be exceedingly rare, from whatever cause. It affords an interesting study to determine the character and the locality of the lesions that can thus coincidently produce a bilateral paralysis of the facial and abducent nerves, and also more or less transiently affect the sense of taste, the secretions of the mouth, deglutition, the ciliary muscle and iris of one eye, and the senses of vision and hearing.

Fracture of the base of the skull, extending into the petrous portion of each temporal bone, might have been such as to cause paralysis of both facial nerves, but such an injury would, undoubtedly have also involved other structures so extensively as to terminate the life of the patient. At least, the auditory apparatus would have been so much injured as to produce total deafness. Certainly the abducent nerves could not, almost alone, have been the only structures implicated with the facial. There is no evidence that there was an external injury at or near the point of exit of the facial nerve from the cranium, especially on the left side, sufficient to produce the facial palsy; and, even if there were, the consecutive palsy of the abducent nerves could not thus be accounted for. Neither does it seem probable that a hemorrhage at the base of the brain, within the membranes, could have destroyed the function of both the facial and abducent nerves on both sides, and in their widely different courses, without seriously affecting other nerves and other functions. Nor could there have been a coincident hemorrhage in the pons Varolii or other parts in the course of the paralysed nerves on both sides, without marked paralysis elsewhere.

Where, then, could a lesion take place that would be most likely to destroy the functions of these two pairs of nerves, and at the same time cause the other symptoms? As is well known, the nuclei of several of the cranial nerves are grouped together in the medulla oblongata, beneath the floor of the fourth ventricle of the brain. In the upper part of this region, very near the median line, is the nucleus of the abducens. Just outside of this, and a little below, is the nucleus of the facial. (These nuclei were, not long ago, supposed to be one.) The fibers from the facial nucleus pass inwards and loop around the inner and upper sides of the nucleus of the abducens. Thus there is

an intimate relation between the root-fibers of the facial and the nuclei of the facial and abducens.

Therefore, a lesion — for example, a hemorrhage — occurring near the median line in this region could impinge upon or affect the nuclei and fibers of these two nerves on both sides, and very slightly or not at all, involve other structures. Granting that there was fracture of the base of the skull; granting that there was more or less hemorrhage from the meninges of the brain, yet I believe that the symptoms in this case can be most rationally accounted for on the supposition of a hemorrhage near the median line of the floor of the fourth ventricle, between and affecting the nuclei of the abducent and the nuclei or root-fibers of the facial nerves. Pressure on nuclei and fibers in near proximity could lead to the less pronounced and less persistent symptoms, such as loss of taste, impairment of vision and hearing, etc., already mentioned.

Total monocular ophthalmoplegia, externa and interna :

Charles Wolf, aged 22, presented himself to me on May 28th, 1889, with the following history : About three and one-half weeks ago while somewhat intoxicated he had a quarrel with another man, who "punched" him in the left eye with an umbrella-stick. The next day or two afterwards he was admitted to the Toronto Hospital, where he was under the treatment of Dr. G. S. Ryerson. I have received the following note from Dr. Ryerson regarding the case, dated June 6th, 1889 :

"Charles Wolf presented himself at the hospital about three weeks ago with a slight scar in the lower lid, and protrusion of eye ; lid showed a little ecchymosis ; ophthalmoscopic signs negative ; said he was quite blind ; went out in about the same state, except that the protrusion had diminished somewhat."

On examining the case I found an irregularly-shaped scar on the left lower lid about three-fourths of an inch long, and running from near the inner canthus downwards and outwards. There was no ecchymosis of skin or ball, or other evidence of a very recent injury. There was complete ptosis of the upper lid, and the eye-ball was very prominent, protruding much farther from the orbit than the right. On raising the upper lid, the pupil was found to be fully dilated, and the ball was totally immobile to voluntary efforts, the patient not being able to turn it, even to the slightest extent, in any direction. By pressure upon the ball it would recede somewhat into the orbit. Ophthalmoscopic examination of the fundus showed the media to be clear, the optic disc pale, and the vessels diminished in size. The vision was entirely lost, the brightest light being imperceptible. General sensation of the ball and of the integument of the lids and forehead of the corresponding side did not seem to be impaired.

It is quite unusual to meet with an injury which so completely paralyses every muscle within the orbit and the circular fibers of the iris and ciliary muscle, and destroys the function of the optic nerve, but does not impair the nerves of general sensation, and the sympathetic fibers, which unopposed, cause the pupil to dilate. It is

probable that the point of the umbrella-stick entered the orbit, and at its apex injured the nerves whose functions are lost, although the history of the case does not make this absolutely certain.

Upon any theory of the *modus operandi* of the injury and paralysis the case is interesting and unusual, as presenting the combined symptoms of proptosis, loss of vision, and total paralysis of all the extra- and intra-ocular muscles.

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## A CASE OF INJURY TO THE MOTOR-OCULI NERVE, FOLLOWED BY PARALYSIS.

By JOHN E. WEEKS, M.D.,

New York.

The peculiar nature of the lesion in the following case makes it one of exceptional interest.

Chas. W. C., twenty-three years of age, came under observation December 1st, 1896, and gave the following history: On the afternoon of November 30th, while fencing, his mask was broken by a thrust with the foil and the end of the latter, with the button attached, struck him on the face, at a point about one-half inch below the inner canthus of the right eye. Slight bleeding from a small wound followed; the pain was slight and referable to the site of the injury. There was no loss of consciousness. Within fifteen minutes after the accident Mr. C. experienced double vision; the eye became closed on account of complete ptosis shortly afterward and could be opened but very little. A physician was seen within a short time, who ordered cold applications.

*St. pr.* On inspecting the wound it is found that a piece of skin, measuring three by ten millimeters, is torn from the subcutaneous tissue, beginning at a point one-half inch below the inner canthus and extending downwards and outwards. The wedge-shaped flap is attached at its base. There is no swelling of the lids. Examination of all the denuded portion with a probe fails to disclose any opening into the deeper tissues. There is complete paralysis of all the muscles supplied by the motor-oculi on the side of the injury. The iris does not react to the stimulus of light or to accommodative effort. There is no paralysis of other muscles; no thermal or sensory disturbances.

Dec. 4.—Ptosis not so marked. The wearing of a shade was advised to prevent disturbances due to diplopia.

Dec. 8.—There has been but little change. Iodide of potash and biniodide of mercury in small doses were ordered.

Dec. 15.—Iris reacts very slightly to the stimulus of light. The ptosis is much less marked, and there is some power manifest in the paralyzed muscles. Strychnia, gr. $\frac{1}{50}$ *t. i. d.*, was ordered.

Dec. 25.—Improvement in the power of all the muscles is observable. Began the application of electricity, using the Faradic current. Potassium and mercury discontinued.

Jan. 13.—Still has diplopia in the left third of the field of fixation. The ptosis has disappeared ; pupil normal in size ; accommodation restored.

Jan. 19.—Muscles virtually normal in power.

Throughout the observations of this case, there has been no headache or any symptom of pain to indicate a deep-seated lesion.

We have here an example of paralysis of the muscles supplied by the motor-oculi brought about by a blow on the skin over the nasal process of the superior maxillary bone without injury to the soft tissues of the orbit. It is scarcely possible to have a hemorrhage into the tissues of the orbit which would produce paralysis of the nature described. There must have been some pressure on the trunk of the nerve itself and, since the branching of the nerve just as it enters the orbit renders it impossible to presuppose an intra-orbital lesion, we must conclude that the lesion occurred either along the intra-cranial course of the nerve or at the point where it passes into the orbit. No evidence of an intracranial lesion could be elicited. Reasoning by exclusion, we are forced to believe that the lesion occurred at the sphenoidal fissure and the sudden onset, without evidence of hemorrhage into soft tissues, makes it very probable that there was a subperiosteal hemorrhage at the place where the nerve passes through the fissure, causing an elevation of the periosteum and pressure on the nerve affecting its superior and inferior branches. We must assume that the branching took place before the nerve reached this point, and that the tumor, thus produced, was not of sufficient size to affect other important structures in the immediate vicinity. The gradual absorption of the blood clot, permitted an almost complete restoration of the function of the nerve. Whether there was a fracture of the wing of the sphenoid at the point indicated, or whether a sub-periosteal vessel was ruptured by the force of the blow, cannot of course, be determined.

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## DINNER OF THE SECTION ON OPHTHALMOLOGY.

The annual dinner of the Section on Ophthalmology of the American Medical Association will take place at 7 o'clock on the evening of June 1, 1897, in the Hotel Walton. Gentlemen desiring to be present at this dinner will confer a great favor by sending their names at once to Dr. G. E. de Schweinitz, 1401 Locust Street, Philadelphia, Chairman of the Section on Ophthalmology. The subscription will be $3. —*Jour. A. M. A.*

# A NEW OPHTHALMOSCOPE.

By JAMES THORINGTON M D ,

Adjunct Professor Diseases of the Eye, Philadelphia Polyclinic, etc.

ILLUSTRATED.

As the writer understands the idea of Helmholtz, who gave us the first ophthalmoscope, was to study the interior of the eye; yet a glance at the many scopes in the market, illustrates how the respective inventors have struggled to make this most valuable of all instruments a refractometer, and, in not a few instances have ruined it for that most important and good work it was originally intended.

To the present-day student's point of view, these "refractometers" are faulty on account of their cumbersomeness, combinations etc., often so puzzling. Now that retinoscopy is recognized as *the* exact objective method of determining the refractive condition of the eye, the ophthalmoscope will be used for its original purpose and incidentally only to measure the approximate refraction.

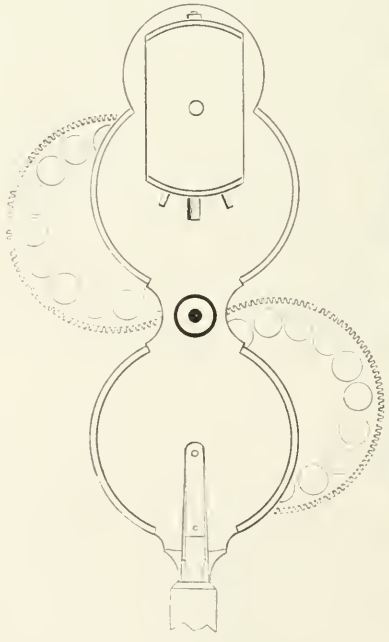

Fig. 1—Front View.
Reduced one-third.

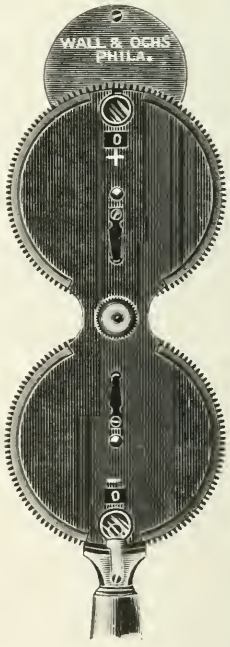


Fig. 2—Back View.
Reduced one-third.

The accompanying illustrations, (Fig. 1, front view, and Fig 2, back view) show the ophthalmoscope about to be described, reduced one-third in size.

It has two separate and distinct disks, one for plus (+) and the other for minus (—) sphericals. Each contains an aperture, and lenses of a diopter interval, from one to fifteen inclusive. *

These disks have deeply milled edges and are connected by a central pin (seen at the narrow part of the instrument) which carries beneath a small cog-wheel, so that by revolving the lower disk the upper one moves at the same time. By lateral pressure of the surgeon's thumb to the right, either disk may be turned into place as occasion may require and as shown in Fig. 1. At the juncture of the handle is a small spring which keeps the disks in position.

The plus lenses are fully sufficient to study the interior or the media of any hyperopic eye and the minus lenses answer for any myopic eye up to fifteen diopters when the indirect method would be used. The sufficiency of these lens series was estimated from 250,000 prescriptions classified by Dr. Risley and myself, which shows less than one-half of one per cent. of hyperopias over seven diopters and a very slightly higher per cent. of myopias over ten diopters.

For approximate refraction within half a diopter, this series answers every purpose and, at the same time, the accuracy of the lens cannot be questioned as it is single and not made by superimposing lenses.

The mirror of four inch focal distance and two millimeter sight-hole has been used by the writer since November, 1895, and was suggested by his retinoscope. The small sight-hole diminishes the size of the reflected corneal image, and gives a clearer view of the fundus through a small pupil, which otherwise is so difficult at times. The sight-hole, not cut through the glass but made by removing the quicksilver, gives additional reflecting surface. By removing or bringing close the original source of light, the convergence of the rays from the mirror can be regulated.

Reviewing the points of merit:—*Mirror*: (1) Short focus; (2) sight-hole small and (3) uncut; (4) corneal reflex diminished; (5) clearer view of fundus than with large sight-hole; (6) no halo in sight-hole as frequently happens when it is cut through the glass.

*Lenses*: (1) Their strength is single and not made by superimposing additional lenses. (2) They are easily kept clean. See

* The ophthalmologist may have the lens series arranged to suit his convenience by having the weaker plus and minus lenses placed in one disk and the stronger in the other.

Fig. 1. (3) They are changed by revolving lower disk and the surgeon's finger does not come in contact with the patient's nose or face. (4) There are no stenopaic slits, cylinders or fractions of a diopter to interfere with the value of the instrument. It is an accurate ophthalmoscope and *not* a refractometer.

To Messrs. Wall & Ochs, of this city, I am indebted for illustrations, careful attention and skilled workmanship in making this instrument.

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## IS THE CORNEAL REFLEX OF PRACTICAL IMPORTANCE IN THE LOCATION OF OPACITIES NEAR THE POSTERIOR POLE OF THE LENS?

By CARL WEILAND, M.D.,

Of Philadelphia.

In the February (1897) issue of the OPHTHALMIC RECORD there is an article by Dr. Jackson entitled: "The location of opacities near the posterior pole of the lens by means of the corneal reflex." Dr. Jackson looks at the corneal reflex through the hole of the ophthalmoscopic mirror, when, as he correctly states, the reflex will always be seen in the direction of the center of corneal curvature. But then he goes on to say: "As he (the observer) moves from A to B the reflex seems to move across the pupil, its rate and extent of movement being exactly what would be the rate and extent of the movement of an opacity situated at the center of curvature of the cornea. Any opacity situated in front of this would appear to move across the pupil more slowly than the corneal reflex and any opacity situated behind the center of curvature of the cornea would move across the pupil more rapidly than the reflex." But even leaving out of consideration the fact that opacities within the eyeball are viewed through a refractive medium and that they, as a consequence of this, appear to be nearer to the observer, than they really are, their localization would be possible only if the corneal reflex always appeared to us to be in the same position. This, however, is not the case. It is quite true that the line along which the observer, under these circumstances, sees the reflex always runs through the center of curvature; but the corneal reflex itself, to which alone we refer the opacities, does not lie at this center but only on the line (secondary axis) at very variable distances from the former. This will be immediately clear if we remember that the corneal reflex is produced by light from the ophthal-

moscopic mirror, apparently from a source in front of it. Calculation shows that with a concave mirror of a focal distance of 230 mm., (the source of light being about 500 mm. away from the ophthalmoscope) the image of the light, or the new source of light for the corneal reflex, lies about 426 mm. in front of the mirror, as can be easily verified by experiment. It is, therefore, possible under these circumstances to throw the source of light as it were into the eye and this is the reason why, as calculation and experiments prove, the corneal reflex may lie anywhere along the principal or secondary axis in front or behind the corneal surface. Of course the corneal reflex may also be made to appear at the center of curvature and this will be the case when we arrange our flame and mirror so that the imaginary source of light in the cornea lies at this center. A practical example will make this contention clearer. We have seen that with the mirror we can produce a new light about 426 mm. in front of it, which is the light-source of the corneal reflex. If, now, one were to hold the ophthalmoscope at such a distance from the cornea that all light rays from it converge towards the center of corneal curvature, let us say, about 8 mm. behind the corneal surface, it would be the same as if one held the ophthalmoscopic mirror at 426 minus 8, *i. e.* 418 mm., from the cornea: the corneal reflex will appear exactly at the center in question. It would thus seem that, with a little modification, Dr. Jackson's purposed method might still be used. But this procedure is not practical, for a slight change in the distance of mirror and cornea produces a very rapid change in the position of the reflex. For example, if we move away only 2 mm. the reflex will lie 4 mm. *behind* the center; if 3 mm. away, 12 mm. *behind* this point; if we move away as much as 8 mm. the reflex will lie at the corneal apex itself, *i. e.* 8 mm. *in front* of the center of curvature. It is evident, therefore, that under ordinary circumstances the corneal reflex is not a practical reference-point for the location of intra-ocular opacities and it is to guard against the fallacies that might arise from the use of this method that these lines have been written.

# A CASE OF CATARACT EXTRACTION UNDER DISCOURAGING CONDITIONS, BUT WITH ESPECIALLY GRATIFYING RESULTS.

By H. MOULTON, M.D.,
Of Fort Smith, Ark.

The restoration of sight to the blind is always a source of joy to the patient and pleasure to the operator. But occasionally this gratification passes beyond the ordinary bounds. It was so in the present case:

A Slav, miner, aged 45, came under my care in March, 1894, and was admitted to hospital. He had a traumatic cataract of the right eye, the result of a contusion, seven years before. Three months previous to admission his left eye was ruined by a perforating wound of the cornea, received while working in a mine. This eye was the subject of chronic irido-choroiditis, was devoid even of light perception and was immediately enucleated under cocain anesthesia. Two weeks later attention was directed to the right eye. The cataract was seen to be partly fluid, with a dark nucleus, which by gravity fell into view or disappeared according to the position of the head. The anterior chamber was very deep and the iris dilated to atropin very imperfectly. Perception and projection of light were only fair. The outlook was, consequently, not very favorable and extraction was undertaken with some misgiving.

Immediately after the incision there was a copious discharge of aqueous, the cornea collapsed and the ball became very soft and flabby, rendering the subsequent steps of the operation very difficult. An iridectomy was done. Incision of the capsule allowed the fluid portion of the lens to escape leaving the nucleus behind, which, owing to the flaccid condition of the ball, could not be removed by the ordinary manipulations. It fell out of sight so deeply in the eye that I feared it had entered the vitreous, but this proved not to be the case. Failing to remove it with a spoon I introduced the iris forceps and finally seized and extracted it. The posterior capsule had remained intact. The collapsed cornea was presently restored to its place by the reaccumulation of aqueous, and the eye was bandaged.

The recovery was normal, excepting a slight iritis on the sixth day. On the twenty-first day the patient was discharged. Before the patient was discharged the tension had become normal but a multitude of dark opacities could be seen with the ophthalmoscope, freely floating around in the fluid vitreous. These, although annoying at first, were less noticed by the patient four months afterwards, although they were still visible to the examiner and in undiminished number.

I attribute the excessive flaccidity of the ball after incision to this condition which without doubt antedated the operation, and which, could it have been known, would have been enough, together with the other circumstances attending the case, to render the prognosis well nigh hopeless, and to have deterred me from operating. Yet the very satisfactory result is my excuse for reporting the case.

At the time of the patient's discharge, and four months later, vision, with + 9 D. Spher., was $\frac{20}{70}$. I have not seen him since, but learned two years afterwards that he was at work again in the mines not far from Fort Smith.

# CORRESPONDENCE.

To the Editors of the Ophthalmic Record.

In the article published in the March Issue of the Ophthalmic Record, on "The Use and Non-use of the Occlusive Bandage in Cases of Heterophoria," Dr. F. W. Marlow states that: "Dr. George T. Stevens protests against the use of the bandage in ophthalmic surgery as being not only needless but mischievous and as the promoter of heat, filth and septicism. He (Dr. Stevens) makes no reference, however, to the influence of the use or non-use of the bandage upon the effect of the tenotomy."

I wish to call attention to what has evidently been overlooked by Dr. Marlow. The question as to the importance of excluding one eye in order to determine the existence of latent heterophoria was thoroughly appreciated and distinctly noted by Dr. Geo. T. Stevens. This is very evident from the following quotation, which I take from the *Archives of Ophthal.* Vol. XVII, 1888, page 169, being one of the series of articles to which Dr. Marlow refers.

"In a certain number of cases I have been able after long-continued search, with failure to discover the real muscular balance, to find the faulty tendencies after faithfully *excluding one of the eyes* during some days or weeks. In order to be effectual the exclusion must be nearly perfect and the patient must not indulge in the occasional use of both eyes." Dr. Stevens states further: "The results of this method are to be accepted with great caution, rather as suggestive than conclusive. It is well known that it is not unusual that one eye, the vision of which is lost by disease or injury, will turn outward. This happens in so large a proportion of cases that it cannot be supposed to be in most instances the result of any original balance of the eyes outward. In like manner, after excluding an eye for one or two weeks, we may find a marked condition of exophoria, which will correct itself after the return to the use of both eyes. Notwithstanding the uncertainty of value of results obtained by the exclusion of one eye, it is a method which in a small proportion of cases has led to information which I have not been able to obtain otherwise."

John T. Carpenter, Jr.,

1419 Walnut Street, Philadelphia, Pa.

# REVIEWS.

**A Case of Dyslexia: A Peculiar Form of Word Blindness.**—By James Hinschelwood, M.A., M.D., F.F.P.S., Glasgow, Scotland. From the London *Lancet*, Nov. 21, 1895, p. 1451.

This is a report of a case in Hinschelwood's practice, together with remarks and deductions. The matter and subject are both interesting, as illustrating instances, which, while perhaps of frequent occurrence, are nevertheless infrequently observed and reported.

Gould, in his "Dictionary of Medicine," defines Dyslexia as a "morbid or aphasic difficulty, or fatigue in reading," and this is probably the meaning conveyed by the expression to most minds, as the word clearly refers to difficulty in interpreting words. If this is true the term Dyslexia is incorrect in the sense used by Hinschelwood. His cases not only mean this, but much more. In his last case especially, his patient not only stumbled over words, but became generally deficient in many other respects requiring an exercise of the field of memory. The term Dyslexia in this case, indicated merely a symptom, and one might as well designate Typhoid Fever under the term "Muttering Delirium," or Descending Optic Neuritis under the word "Scotoma." The condition is a more or less general deficiency of the function of memory or comprehension, of which the inability to read words is but a mere subdivision. Hinschelwood, himself, realizes the inadequacy of the expression, for in his essay he says, in referring to Berlin's Monograph, "The term Dyslexia applied to these (Berlin's) cases by Professor Berlin, is a convenient one, and I have adopted it as describing the *prominent symptom in my case*."

Hinschelwood quotes at considerable length Berlin's 1887 Monograph, in which he reports several cases of Dyslexia, and details verbatim his first case. The reviewer would beg to suggest that Berlin's cases were truly examples of Dyslexia; at least, in the case quoted by Hinschelwood, only the function of interpreting *words* is mentioned; while in Hinschelwood's own cases the mental dullness extends over a much wider territory, i. e., to places, objects, etc., placing Dyslexia as merely a symptom of the disease, a prominent one, may be, but still merely a symptom.

Various mental functions may be deficient. For instance, as in cases cited by Edgren of Stockholm, an individual may have lost the power of musical expression, which he calls "Amusia," or inability to

read musical notes. In other instances the power of using correct words may be lost, and is called "Aphasia," etc. Inability to read or comprehend previously understood legible words, is called "Alexia," while "Dyslexia" means great *difficulty* in reading or comprehending previously understood legible words. Equally objectionable is the expression "word blindness" coined by Kussmaul, unless it is used *specifically* to designate an alexic condition, and this only. Kussmaul claims that his expression indicates a pathological condition of a special faculty. This may be, but the reviewer is of the opinion that usually other adjacent anatomical portions of the brain are apt to be co-incidentally affected and will evidence themselves by distinct indications.

The term "mind-blindness" is a comprehensive expression, evolved by some one, but here the other extreme is reached. It is *too* comprehensive. It means too much, just as Dyslexia and Alexia signify too little. A word should be coined indicating difficulty or inability to comprehend or understand any or all visible objects.

It is difficult to separate the present report from Hinschelwood's first article on the subject, appearing in the London *Lancet* of 1895, p. 1564. They should appear together, and would jointly constitute the best literature on the subject in the English language, although some of the continental writers have written more exhaustively, especially Berlin in his brilliant Monograph. Hinschelwood's last case, reported Nov. 21, 1896, was that of a middle-aged, intemperate tailor, living in Glasgow, who, after having enjoyed the reputation and wages of an expert workman for some years, suddenly developed great difficulty in comprehending the meaning of perfectly legible words. He could see words and understand them for a moment, and then, while still able to see them, could not comprehend them. This dullness of comprehension and memory soon pervaded other phases of his life. He could not remember where he had placed his needle or thread, and spent much time in searching for these, while perhaps looking straight at them. He mismatched pieces of any garment he might be making. He could not find his way home, although surrounding objects and places were familiar to him by long association. Household objects suffered the same fate, and he seemed like a stranger in a strange land and habitation. All these symptoms became so aggravated that he finally lost his employment and was taken to the hospital, where Hinschelwood attended him. He had been for many years intemperate, but latterly, becoming alarmed at symptoms of too great indulgence, had mitigated his potations. Hinschelwood insisted on total absti-

nence (to which he mainly attributes his cure) and placed him on arsenic and strychnia, which so benefited him that in a few weeks he was able to leave the hospital and successfully resume his trade.

Hinschelwood's first case, reported in 1895, shows the patient to have undergone much "mental worry," just preceding the inception of alexic and dyslexic symptoms. He was able to designate letters but could not combine them into words. As an exception to this, small familiar words, such as "the" were recognized as if they were only one letter. Badal explains this by saying that a short familiar word like this is perceived as a graphic unity, without the necessity of analyzing it into its constituent letters. It thus appears that in both of Hinschelwood's cases the attack was preceded by some form of cerebral irritation. This, in the opinion of the reviewer, based upon investigation of reported cases, will usually be found to be the case.

In order that vision may be complete and useful, two normal functions are necessary. First, to perceive; second, to comprehend what is seen. The first of these functions is not especially noteworthy in this instance, although amblyopia may be present and vision curtailed. But it is with the second that we have to do; the ability to comprehend what is seen. Without this the first function is bereft of most of its usefulness, at least so far as intellectuality is concerned.

The seeing or perceiving function starts in the eyeball proper, but perceiving, in its highest sense, is not accomplished here, but in the occipital portion of the brain. The reviewer quotes from Hinschelwood in describing the locality and function of perceiving and comprehending.

"The occipital lobe, especially in the neighborhood of the cuneus, and the calcarine fissure, is the center for primary visual impressions, *the perceptive center*, and in the angular convolution and its neighborhood there is a center of a higher nature, one of whose functions seems to be the storage of the visual memory of things and words, the *visual memory center*. It is evident, from what has already been said, that the functional activity of both these centers must be called into play in every conscious and intelligent exercise of vision. It is now a matter of general agreement that the primary visual center in the occipital lobe is connected with the half of the retina in each eye, the left occipital lobe with the two left halves, and the right occipital lobe with the two right halves. But since the left half of each retina corresponds to the right half of each visual field, a lesion in the left occipital lobe would produce blindness in the right halves of both

visual fields, or, in other words, a right hemianopsia. The hemianopsia is termed homonymous because it is on the same side in relation to both eyes." The same condition may of course be reversed.

Hinschelwood, with other authorities, seems agreed as to the seat of perception, but a rather hazy description is given by Hinschelwood, and others for that matter, concerning the location of the *visual memory center*, some authors even going so far as to locate it in a situation as general as the "left cerebral cortex." Matters of this kind should be stated with exactness and definiteness, always using the same word to express the same thing, especially in the same article. The reviewer would suggest, as a correct and simple expression of the location of this center as follows: the Angular convolution in the left inferior parietal lobe, and the Cuneate lobule on the mesial surface of the left occipital lobe. It is here, then, that memory is stored, commencing with the earliest impressions, and going on to old age. Memory after a time almost loses its identity as such, and we scarcely realize that the comprehension of a word, object, place or person, is in reality but the product of accumulated memories, and that the destruction of the visual memory center would blot out the power to comprehend the significance of any form of matter conveyed to the brain through the eyes. Under such circumstances, objects can be seen, because the perceptive center may not be impaired, but they cannot be understood when the visual memory center is injured.

This brings up another point. The visual memory center must be subdivided into many different departments, for we see patients suffering from the disease in question where only certain visual memory impressions are impaired, as, for instance, the power to interpret words, or figures, or places, or persons, etc. For instance, Mierzejewski reports a case where individual names and letters were known and named, but could not be united into syllables and words. Michel reports a case where a patient could read Gothic but not Latin characters. Charcot had a case where a patient, knowing French, German and other languages, lost the memory merely of the Greek and German characters. The reviewer remembers the case of a young lady, who, after a severe sickness, found herself utterly and permanently unable to remember the identity of her fiancé. People frequently seem to be more or less affected with a temporary and non-pathological paresis of the visual memory center, as, for instance, during periods of fatigue or abstraction, when a friend may be met, seen, but not recognized, or when paragraph after paragraph may be read and re-read without

being mentally comprehended. Some people have special departments of mental comprehension or memory well developed, such as memory for faces, figures, locations, etc., while others are greatly deficient in these special functions. This means natural adaptability combined with cultivation by taxation or practice of certain fibers of the visual memory center. Hinschelwood separates visual memory into two main groups. First, a group of highly specialized visual memories for the acquirement of which great mental concentration is necessary; and, second, a group of visual memories for form, color, objects and places, for the acquirement of which no great mental effort is required and which are possessed by all men who have the sense of vision. The former he claims is situated usually in the left cerebral cortex (accounting for right lateral homonymous hemianopsia which so frequently obtains in these cases) and the special high class functions are grouped anatomically, accounting for the frequent co-incident obliteration of these functions, while the more common functions grouped under the second classification are bilateral in anatomical location and their utter extermination is, therefore, more infrequent.

This review cannot be better closed than by quoting a portion of the summary of Hinschelwood's last article, in which he so graphically describes the condition of the intemperate tailor.

"Increasing knowledge of the cerebral derangements of vision, based on clinical and pathological observation, makes it clear that we must carefully distinguish between the visual perceptive center and the visual memory center. The perceptive centers, situated in the occipital lobes chiefly in the neighborhood of the Cuneus and Calcarine fissure enables us to have conscious perception of objects, as occupying a definite position in the visual fields. Derangement of this visual center is evidenced by defects in the visual fields which have all been carefully studied. But the act of vision is infinitely more complex than the simple perception of an object as occupying a particular position in the visual field. It involves complex judgments and, above all, a constant comparison of present visual impressions with the vast series of past visual impressions, the accumulated riches of our life-experience, which are stored up in a special cerebral area, the visual memory center occupying the supra-marginal and angular gyri. Derangements of this center are evidenced by the various forms of mind blindness. The objects are distinctly seen but they convey no information to the individual since they are no longer recognized by him.

Word blindness and loss of memory for places and objects are all simple varieties of mind blindness. Clinical experience and pathology teach that word blindness, or loss of the visual memory of word symbols, is due to a lesion in the visual memory center on the left side of the brain. In most cases of word blindness there is no interference with the other forms of visual memory, such as those of places, of objects, of form and color. When there is complete mind blindness involving the loss of all forms of visual memory it is probable that there is a bilateral lesion involving the center on both sides of the brain. In the present case there is nothing approaching to complete mind blindness, but the loss of memory for places and the striking failure of that necessary for his employment, in addition to the peculiar derangement of the visual memory for letters, suggest the probability of some impairment of the function of the right as well as the left center. Nor is this supposition improbable when we consider that many of the nervous disorders due to Alcoholism are bilateral, such as Amblyopia and the ocular paralyses which are sometimes met with. It is a familiar fact that while Alcoholism has a hurtful influence on the whole nervous system, its toxic influence may manifest itself by attacking specially some particular nerve or group of nerves or even some particular bundle of nerve fibers."

FRANK ALLPORT.

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**Is there a layer of Pigment Epithelium cells between the Choroid and Retina?**—By Adolph Alt, M. D., *The American Journal of Ophthalmology*, Vol. XIV., No. 2, 1897. In commenting upon an article in Knapp's Archives by G. Lindsay Johnson, of London, entitled, "Observations on the Macula Lutea" Dr. Alt says:—

"Among the results of his (Johnson's) observations there are, however, a number which are so startlingly at variance with what has thus far been generally considered to be correct, that they necessarily arouse a renewed study in this most interesting field." He then quotes from Johnson's article as follows:—"As to the hexagonal pigment layer itself, it is permeated to such an extent with pigment, that it is excessively difficult to distinguish its structure clearly unless very thin sections be made." It seems to me that what have until now been taken for the nuclei of hexagonal cells are independent spherical corpuscles (spherules)." And further on:—"The fact that in some cases these spherules are entirely detached and and float free in the field of the mic-

roscope, the fact that *I never have seen hexagonal cells isolated* or even partially detached from each other along the line of the septa and lastly the fact that spaces can frequently be seen around these spherules when *in situ*, all point to their not being nuclei." Dr. Alt differs from this description on the point as "to the existence or non-existence of a hexagonal pigment cell layer consisting of distinct and separate cellular elements" and says:—"In spite of the scholarly investigations of Johnson, it seems to me that such a layer of cells does undoubtedly exist and that his spherules are after all the nuclei of these cells." He further states that, "The regularly outlined and sharply defined hexagonal pigment cells as they are usually drawn in the text books, are but rarely seen," and gives two photographs which show what is most frequently seen, "an irregular dark net work consisting of pigment granules and spiculae, varying considerably in density and depth of color, which surrounds numerous light spaces of a round or oblong shape."

He gives another photograph and says he thinks "there can be no doubt as to the fact, that this membrane consists of cell bodies of distinct individuality, and that the picture shows there is a cementing substance between these cells and that the cells may become *separated in the line of the septa*. The shape and size of the cells in this particular specimen vary greatly. Some cells are double and more the size of others, and while some have only five angles, others have seven and even eight, the majority are, however, hexagonal.

In explanation of these varying pictures and the comparative rarity of specimens which show, without any interference, the exact shapes of the cells and leave no doubt as to our really having to deal with cells, we must assume that such pictures are due to the physiological migration of the pigment into the interstices between the outer segments of the rods and cones. Naturally, different periods in this process must give different pictures. To make certain that the pigment layer is composed of individual cells with nuclei is not very feasible by simply scraping the pigment layer of the choroid. Such a procedure generally breaks up the cells and is useless.

An undoubtedly convincing proof of the fact that there is a separate pigment epithelium layer, consisting of cells of a more or less regular hexagonal shape, with a nucleus belonging to each cell, is most easily obtained by bleaching the pigment. When the bleaching has been successfully accomplished, we see in transverse sections a continuous row of separate and distinct cells, each one with a nucleus lying

sometimes closer to the retinal, sometimes to the choroidal surface of the cell. When viewing the whole layer from its retinal surface, we again see that it consists of individual cell-bodies more or less hexagonal, each with a nucleus which very frequently (almost always) does not lie in the center of the cell but in or near one of its corners. These cells are divided from each other by some cementing substance. Under such circumstances it is not difficult to isolate the cells, as the bleaching process probably destroys the cementing substance between them." One figure shows a group of such isolated, bleached and stained pigment epithelium cells scraped from the choroid with great care; another figure shows an isolated, octagonal bleached cell magnified about 1200 times which has two nuclei. He has also seen now and then a cell with three nuclei. From the foregoing Dr. Alt concludes that we have good reason to adhere to the older views and to maintain the existence between choroid and retina, of a pigment epithelium layer which consists of individual cells of an almost regularly hexagonal shape and each with a nucleus. He also refers to the pathological changes peculiar to this layer which seem to him to offer still greater and more powerful evidence against Johnson's opinion.

E. OLIVER BELT.

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The Austrian Government, notwithstanding the resistance of the majority of doctors, has just decided to modify the old state of things by presenting a bill which regulates the salary of the professors of a university. This bill suppresses the fees of students to professors and allots the payment of professors directly to the government. Students will not pay less, but they will pay to the government and not the professors. This is the French system. The professors who teach abstract matters and who have small audiences will profit by the change but others, and particularly professors of clinics, who have from three to four hundred students, will see their revenues considerably diminished. It is to be feared that these professors will no longer hesitate to respond to calls from German universities, and on the other hand that German professors will refuse henceforth to accept a chair in an Austrian university. The new law would be fatal to the old fame of the medical school of Vienna.—*Chicago Med. Recorder.*

# REPORTS OF SOCIETIES.

## CHICAGO OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

A regular meeting was held at the Chicago Athletic Association March 9 1897.

Dr. Montgomery in the chair.

Dr. Hale showed a case of congenital cataract in a young man whose right eye had been needled four times and efforts made to extract the lens substance through a large cut in the cornea. There was still left considerable lens matter directly behind the pupil which interfered greatly with vision. The cataract in the left eye had not been touched and was of a triangular form. Dr. Hale desired the opinion of the Society as to the best method of procedure with the right eye.

Dr. Gamble showed a young lady with stellate congenital cataract in each eye. They had not been operated upon.

Dr. Montgomery showed a case of Gumma of the ciliary bodies. The patient was a young man who had syphilis about a year ago, which was treated. In October, 1896, pain began in the right eye. This increased in severity, running into the temples and was accompanied by great injection. In November he was admitted to the Eye and Ear Infirmary with a severe iritis and great bulging at the sclero-corneal junction of the temporal side in the right eye. Apparently the iris had been drawn back into this bulging so that the pupillary edge was almost out of sight. The patient was put on calomel, $\frac{1}{10}$ of a grain every two hours, but the symptoms increased in spite of this. Then the bulging and iritis began in the left eye. The treatment was changed to iodid of potash and increased to 45 grains three times a day which was the saturation point. The symptoms rapidly disappeared and in two weeks the patient was without pain. The right eye, however, had a block pupil, and one week ago Dr. Montgomery had done an iridectomy on this eye.

Dr. Tilley showed a case of congenital paralysis of the third nerve. The fibers which supply the iris and ciliary muscle were not affected. This case was shown some ten years ago at the Chicago Medical Society, and since that time the only additional factor was a well determined history of syphilis in the parents. Both eyes turned strongly down-

wards and outwards, the patient being obliged to throw back and turn his head to the side in order to see with either eye. There is some myopia in both eyes and the vision of the two is about the same. The only movement is a slight downward and outward one. Dr. Tilley thought there was probably a congenital absence either of the nerve or the muscles. He was afraid to operate on the ptosis for fear that the patient could not close the eye sufficiently to cover the cornea.

Dr. Hotz reported two cases of lamellar cataract.

Case 1st, had almost normal acuity of vision and good accommodation. The patient was a young man, 23 years old, who came in April, 1896, because his eyes ached a good deal at continued near work. He was wearing concave sphero-cylinder, prescribed three years previously. With these glasses the vision of the right eye was $\frac{20}{100}$, of the left $\frac{20}{70}$. Each eye showed a hazy condition of the lens, which, after the pupils were well dilated, presented the characteristic picture of lamellar cataract. In both eyes the opaque portion showed a circular outline from which, however, numerous very short but distinct dark lines were projected in such regular intervals that the whole looked very much like a fine cog-wheel of a watch. The diameter of the opaque portion was the same in both eyes, that of the right being a little duller than the left. In the right eye the best vision obtainable was $\frac{20}{70}$ with *minus* sphero-cylinders, while in the left eye $\frac{20}{30}$ was obtained in the same way. With these glasses the patient could read Sn. 0.5, though he preferred the *minus* cylinders without the spheres.

In case 2nd, there was an unusual occurrence after the needle operation. In April of last year Dr. Hotz operated on the eyes of a four-year-old boy for lamellar cataract, the operation consisting of a small incision into the anterior capsule of the lens. No reaction followed; the pupils were kept well dilated by atrophin and the cortex became gradually opaque. A week later, in the right eye, the entire central portion of the lens (that which had originally been enclosed in the opaque lamella) was found in the anterior chamber. This same thing happened a week later in the left eye. The lens nuclei looked like very small lenses, being circular in outline, and they were absorbed in such a manner as to become gradually smaller, still preserving their shape and not breaking up. In June a needle operation, done on the capsule, left the eyes in very good condition, the fundus details being clear with a + 8 lens.

Dr. Holmes had had a similar experience of the lens nucleus falling into the anterior chamber, but it there set up so much irritation that he had to do an iridectomy.

Dr. Gradle had had a case in which the nucleus protruded through the wound in the capsule, but did not escape into the anterior chamber; it slowly absorbed in this position.

Dr. Coleman had recently had a case of a child, six months old, with marked congenital cataract in both eyes. Six months ago he had told the father (who was a physician) that he thought it would be better to operate later, but in the meantime the cataracts had disappeared. Dr. Coleman would hesitate to remove any congenital cataract except by discission.

Dr. Hale asked if anyone had ever seen the punch which he had seen described for the purpose of making a hole in an opaque capsule.

Dr. Pinckard had seen the punch, but had never seen it used. He doubted the value of it in such cases.

Dr. Hotz said that in Dr. Hale's case probably the two-hook operation would be as good as any.

Dr. Colburn had used a double needle.

Dr. Macarthur stated that the two-hook operation was still used very extensively in the London clinics.

Dr. Hotz thought that it might be wise in Dr. Tilley's case to try to raise the eyes by advancement of the superior recti. He thought that any interference with the lateral muscles might produce a troublesome diplopia.

Dr. Colburn had had a case similar to Dr. Tilley's, in which after very extensive advancements and tenotomies he had finally succeeded in getting binocular vision. He had found no trouble in securing sufficient fibrous tissue to make the advancements, although there was no ap parent muscle.

Dr. Gradle stated that he had not succeeded in getting diplopia in cases of congenital paralysis and that the patients were never troubled with this symptom.

Dr. Pinckard stated that he had had a similar experience, it being impossible to provoke double vision in these cases.

C. P. PINCKARD,
*Secretary.*

## SECTION ON OPHTHALMOLOGY.

College of Physicians, Philadelphia.

Transactions of the Section on Ophthalmology, Feb. 16, 1897. Dr. Wm. F. Norris in the chair.

Dr. de Schweinitz described a case in which *A Piece of Steel Imbedded in the Ciliary Body was Located by Means of Roentgen's Rays.* Extraction with the electro-magnet was performed after two similar operative procedures without the use of the rays had been unsuccessful. In spite of the repeated traumatisms the patient recovered with good vision. The foreign body had remained in the ciliary body for twelve days and had caused cyclitis. Dr. Max J. Stern, of the Philadelphia Polyclinic, furnished the radiograph, which clearly indicated the position of the foreign body, and which had been unrecognisable by ophthalmoscopic examination owing to the hazy condition of the media.

*Discussion.*—Dr. H. F. Hansell: The case just reported is the fourth in Philadelphia, and, with the exception of those of Williams of Boston and Clark of Columbus, the only ones that have thus far appeared in print. Dr. de Schweinitz is to be congratulated on the brilliant success following the extraction of the steel. The condition of the eye indicated that still further improvement of vision was to be expected. It has been thus positively demonstrated that the Roentgen ray will not only penetrate the coats of the eye and the media, but also the bones of the orbit, and that both the presence and the approximate location of a piece of metal can be positively diagnosed.

Dr. W. F. Norris: In confirmation of the last remark I will state that I have recently treated a case where Dr. Leonard has, by passing the rays through the bones of the head, demonstrated the presence of two No. 6 bird-shot in the orbit and one in the pharynx in the same patient. The Crooke's tube was held on one side of the head and the plate fastened on the opposite temple.

Dr. Wm. Thomson suggested the advisability of inserting into the conjunctival sac a strand of lead wire and the encasing of the anterior section of the ball in a lead plate as material aids in locating the precise position of the foreign body.

Dr. S. D. Risley reported a *Case of Detachment of the Retina and Choroid.*

Mr. H., aged 29, was brought to me in consultation by Dr. Leavitt, of Trenton, N. J., November, 1896. He was suffering from violent left hemicrania which originated in the left eyeball. O. D. ap-

peared healthy but was unduly sensitive to light, which caused throes of increased pain in the left eye. V=$\frac{6}{9}$. The left eye was totally blind, but the iris acted consensually with that of the right eye, both as to light and in accommodation. Two years ago, while gunning for ducks, a fellow sportsman discharged his gun, heavily charged, with its muzbut a few inches from the left side of his head. The report deafened him, he became giddy and nauseated, and placed his hand on his left eye under the impression that it had "bursted" and "was lying on his cheek." There was at first violent and distressing tinnitus, which grew slowly better for a few days, but has persisted up to the present time. There was no discharge from the ear and no evidence of a rupture of the membrana tympani. The vision in the left eye was much impaired immediately after the accident, but the eye was not painful. The vision, however, grew steadily worse until in about a year there was no longer any perception of light, although he was constantly annoyed by photopsies. Tension was subnormal, but the ball was not soft. The cornea and lens were transparent, but only a faint red reflex could be obtained through the narrow pupil. The pupil dilated well under cocaine and homatropin. No view of the optic nerve was possible, but the retinal bloodvessels could be traced far forward over a darkred undulating surface, except in the upper and inner quadrant of the ophthalmoscopic field, where they could be faintly discerned apparently in situ. The case appeared to be one of detachment of both the retina and choroid.

The accident was certainly an unusual one. I know of no other instance of detachment of the retina from concussion. The total blindness is not readily explained except upon the supposition that there was at the time of the accident a retro-bulbar hemorrhage. It is probable that extensive detachment of the choroid and retina occurred at the time of the explosion, which caused the "bursting" sensation he experienced and the immediate impairment of vision, while the increasing blindness ending in total loss of light perception at the end of a year was due to atrophy induced by the retro-bulbar hemorrhage.

Dr. W. Zentmayer reported a *Case of Anomalous Pigmentation of the Retina* in the right eye of a girl nine years of age. The personal and family history are irrelative. In the right eye scattered throughout the fundus were blackish pigment spots, some triangular, others irregular in form, of various sizes and of unequal distribution, most numerous and most closely grouped along the vessels in the inferior temporal sector. The pigment was deposited under the retinal vessels

generally in double patches, resembling gonococci, fairly uniform in width (that of a retinal vein). In the nasal and superior parts of the fundus they were larger and more scattered. Their outline was sharply defined against the adjacent healthy choroid. The papilla was of good tint and the vessels of normal caliber. In the periphery of the fundus of the left eye an insolated round pigment spot could be seen. In all save one of the cases on record the condition was nonprogressive, the function of the retina and optic nerve was normal, there was no evidence of past or present inflammation, and, in several instances, masses of pigment have been found in unusual localities in the fundus of the fellow eye. These facts support the opinion expressed by Stephenson that the condition "is a nonprogressive, congenital deposit of pigment."

Dr. W. C. Posey exhibited a *Case of Congenital Pigmentation of the Retina* similar to that presented by Dr. Zentmayer, with the exception that the clusters of pigment are grouped around one of the vascular stems of the inferior temporal retinal artery, observed in a young girl who came for glasses. After her myopic astigmatism was corrected, she had full visual acuity in both eyes. There were no other evidences of retinal or choroidal change in either eye. Although the origin of this affection is still shrouded in mystery, nevertheless the association of these pigment clusters with the vessels suggest a vascular origin for them.

Dr. G. C. Harlan reminded the Section that at one of the earlier meetings of last winter he had shown a patient illustrating a *New Method of Dealing with Cicatricial Contraction of the Orbital Tissue after Enucleation*. There were a number of cicatricial bands extending from the lids to the bottom of the conjunctival sac which obliterated the sulcus and made it absolutely impossible to wear even the smallest artificial eye. The attempt was made to form an artificial sulcus by passing a thick lead wire around the bottom of the cavity through the contracting bands and allowing it to remain in position until the walls of the sinus it had formed had completely cicatrized or "skinned over." The patient was wearing the wire at the time and continued to do so without inconvenience for six or eight weeks, when it was removed by incising the tissue in front of it and a leaden shell was inserted whose edges rested in the grove where the wire had been. Later an artificial eye was substituted for the leaden shell and has been worn since without inconvenience. Dr. Harlan has two other patients under similar treatment, one of whom was exhibited at this meeting with the wire in place.

*Discussion* —Dr. P. N. K. Schwenk has proposed, in order to avert the edema that so often follows the use of the leaden plates and artificial eyes, that holes shall be bored near their edges. By these means he has prevented the formation of a vacuum behind them, caused probably by the absorption of air that had been introduced at the time of insertion of the artificial eye.

Dr. S. D. Risley believes that Dr. Schwenk's theory of the causation of edema by these agents is correct. As the air behind the eye becomes absorbed, the edges of the eye press upon the conjunctival veins and produce a constant traumatic edema. In a case in which he is about to operate he proposes to insert after incision of the cicatricial bands the sphere used in the Mule's operation. The principle is the same. By substituting the convex instead of the concave shell he hopes to avoid cicatricial contraction and edema.

Dr. Schwenk exhibited, by invitation, a *New Artificial Eye* that has the advantages over those now in use in that the edges are thick and rounded, and the body is much heavier, so that it will not fracture even if exposed to considerable violence.

Dr. A. G. Thomson exhibited, by invitation, a *Case of Foreign Body in the Lens*. A weaver of 25 applied at the Wills' Hospital, service of Dr. Wm. Thomson, in January, 1897, complaining of asthenopia only. The R. eye had been convergent and amblyopic since childhood. With a cylindrical correction vision of L.—the wounded eye—was $\frac{5}{3}$, and by its use his symptoms disappeared. Tenotomy of the interni cured the squint. In February he returned complaining of the diminished vision in the L. By oblique illumination a bright reflecting foreign body was easily seen in the posterior half of of the lens. It was then learned that in December, while using a hatchet on the top of a wooden box, the patient had the sensation of a foreign body impinging on the cornea, and concluded he had been struck by a piece of wood. This he thought had been removed by his physician. Vision had decreased to $\frac{5}{30}$. A small linear scar on the lower outer sector of the cornea, a similar scar on the lens capsule, and the quiescent foreign body lying in the lens substance could be seen. The lens fibers had commenced to become opaque, although in the track of the foreign body they were still clear.

The features of especial interest in this case are the freedom from all irritation and the preservation of vision for two months after the entrance of the foreign body, and the treatment to be adopted, namely, whether the foreign substance shall be extracted by the magnet

if it is a piece of metal, or whether, should it be metal or wood, the lens in its capsule be extracted.

*Discussion.*—Dr. Edward Jackson had searched, before the lens became as opaque as it now is, to find the path of the foreign body through the lens and had been unable to see the slightest trace of it. Opacification had developed first immediately adjacent to the anterior and posterior capsule, and even now had not penetrated into the nuclear region. He had seen cases in which opacity had formed soon after the entrance of a foreign body, and then had disappeared to reappear three or four months later. In a case of dislocated lens in spite of repeated needling the disturbed portion of the lens cleared and continued free from opacity.

Dr. Harlan considered the best treatment in the case of this patient to be the extraction of the foreign body by means of the magnet while the lens was clear, and the extraction of the lens later. A case of his own had justified these measures.

Dr. B. A. Randall suggested that the so-called foreign body might be a deposit of pigment. He had seen a number of children that showed similar opacities that closely resembled foreign bodies even to the metallic shine, but in which no history of traumatism could be obtained. The deposits were in the posterior part of the lens and occasioned no trouble.

Dr. Wm. Thomson proposed to submit the patient to the X-rays, in order to determine whether the foreign body is a piece of metal or a piece of wood. If the former, a powerful magnet could be employed to draw it forward so that it could be more readily extracted. In its present position extraction would be extremely difficult. He suggested, first, discission and removal of the anterior portion of the lens, then the introduction of the magnet, or Pagenstecher's operation for the removal of the lens in its capsule, or, better still, the extraction of the lens with the foreign body by the usual method for senile cataract.

Dr. Risley thought that if the body is metallic the X-rays would be desirable. He considers the Haab magnet dangerous on account of the liability of the body to fall into the posterior chamber, as had twice happened to him. The safest procedure would be the Pagenstecher operation after a large preliminary iridectomy.

Dr. de Schweinitz suggested the use of the Haab magnet or the method advocated by Dr. Harlan. In reference to the amblyopia we must remember that "neglected" eyes can be divided into two classes: those that have defects in the field for form and color, especially sco-

tomas with changes in the nerve and retina, and those that are amblyopic without anatomical changes. In the former no improvement of vision can be expected, while the vision of the latter may be improved by enforced use.

Dr. Charles A. Oliver exhibited a *Case of Reparation from Injury Involving the Inner Angle of the Eyelids* in a twenty-seven-year-old boilermaker, who was struck in the left eye with a piece of "red-hot steel." The eyelids were torn apart at the inner canthus, and there was a deep sulcus of burnt tissue extending almost one and one-half centimeters back and into the orbit. The torn conjunctiva protruded through the palebral fissure. The eyeball was uninjured. The wound was cleansed and the parts stitched into position so as to cover the sulcus. In one week's time the wound was healed, leaving almost invisible traces of the former accident.

Dr. Edward Jackson showed a *Modification of his Binocular Magnifying Lenses* for use when operating upon the eyeball. The lenses were supported by a metal head-band such as is used for the head-mirror, but with two arms, giving a more fixed position and preventing lateral tilting. This arrangement gave a distance of three inches between the lenses and the seat of operation, and six inches or more between the eye operated upon and the eyes of the operator. He had employed it for the removal of foreign bodies from the cornea, curetting corneal ulcer, division of congenital and secondary cataracts, cataract extraction, iridectomies, etc., and in operations of this kind thought it would prove most valuable. In commencing the use of it there is need of some care not to underestimate the length of the incision or the amount of tissue removed.

HOWARD F. HANSELL,
*Clerk of Section.*

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## TWELFTH INTERNATIONAL MEDICAL CONGRESS.

Claudius H. Mastin, M.D., of Mobile, Ala., has been requested, and has consented, to serve as one of the members of the American National Committee of the Twelfth International Medical Congress to be held in Moscow Aug. 19-26, 1897. The Central (Moscow) Executive Committee consists of the following gentlemen: President, Prof. I. F. Klein; vice-president, Prof. A. J. Kojewnikow; treasurer, Prof. N. F. Filatow; Secretary-General, Prof. W. K. Roth; Secretaries, Profs. P. I. Diakonow, W. A. Tikhomirow and I. I. Hoyding; members, Profs. S. S. Korsakow, J. F. Ognow and W. D. Chorwinsky. It is officially announced that preparations are being made for the reduction of Transatlantic steamer and European railroad fares.—*Jour. A. M. A.*

## WESTERN OPHTHALMOLOGICAL, OTOLOGICAL, LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

Thursday, April 8th, 1897.

The President, Dr. Adolf Alt, called the Association to order.

In consequence of the unavoidable absence of Dr. Langen, Dr. F. J. Lutz welcomed the Association to St. Louis.

Dr. A. C. Corr, President Illinois State Medical Society, responded to the address of welcome.

Dr. Adolf Alt, President of the Association, delivered an address. Dr. Corr moved that a committee be appointed to take into consideration the suggestions of the President, and report at a later meeting. Seconded and carried.

The President appointed Drs. Fryer, Corr and Dayton such committee. The members present thereupon registered.

Dr. Foster, the Secretary, made his report and moved that a committee of two be appointed to draft resolutions regarding the death of Dr. W. C. Pipino. Carried. The President appointed Dr. Hoit and Dr. Tiffany.

Dr. Geo. T. Suker, of Toledo, Ohio, read a paper on **Pyramidal and Senile Cataract in One Subject.**

DISCUSSION OF PAPER.

Dr. Fryer: I want to congratulate the doctor on his very admirable paper. I think the large majority of oculists will agree with him as to the etiology, and as to the practice in bettering these unfortunate conditions. I am positive that what the doctor states in regard to the positive interference with vision is quite true, and that the proper attention has not been given by prominent men to that point. If the iridectomy is done, Mr. President, I think the majority of oculists will agree in the necessity of its being done early or we will have amblyopia, which the doctor speaks of. Then it is too late. I believe that the doctor does not state that this is always unilateral; that it is so in a number of cases. My experience is that while there is a unilateralism in degree, with vision in the fellow eye, there is a slight opacity, and if it is looked for very frequently it may be found, even if it is not enough to interfere very materially with vision. But in the majority of cases I believe that both eyes are affected, always in less degree.

Dr. J. O. Stimson, of Indianapolis: I wish to say that I am in accord with the views of this paper, and I call to mind now, two cases

in which I made operations along the lines advocated by the Doctor, notwithstanding the fact that my early teaching was contrary to this line of practice. I have in mind now a case operated on as long ago as 1878. The child at that time was a boy of some seven or eight years of age, and was brought to me as a blind child. I made an iridectomy; it was bilateral. That young man to-day holds a position as book-keeper in a prominent wholesale house; he travels everywhere, sees to do anything that anybody cares to do, and is enjoying good sight, and probably will as long as he lives. I have seen a number of these cases in the Indiana Institution for the Blind. They are sent there as blind people, and are regarded as blind people, and study the blind methods. When a patient of that kind remains in an institution for the education of the blind a number of years and learns to read by the blind method, the full advantage of the benefits to be derived from operation are not liable to be appreciated, and the friends of the patient are more or less likely to regard an operation as dangerous or risky. I cannot see for my part why an iridectomy should be attended with any more risk under ordinary circumstances in a case of that kind than it should be in any other case where it is indicated, provided the attention is right. The other case was in a person in whom I made a double iridectomy, with corresponding good results. Now of course my idea is that the iridectomy ought to be small, and it ought to be made downward, provided the cornea is clear in this neighborhood, for the simple reason that the eye will rotate and the upper palpebral margin will cover the deformity, and in that way we get a cosmetic effect which is beneficial, whereas if the iridectomy is made upward this relief of the cosmetic difficulty will not be so apparent, neither will the sight be so good. As I intimated before, I do not see why in these cases, unless there is some other lesion such as some retinal disturbance, an operation of this kind is not altogether justifiable, in fact why it should not be really recommended. So I am happy to say to the Doctor that I have been of this mind, and have acted in this way, notwithstanding my early teaching was against the operation in these cases.

Dr. Alt: I would like to say a few words on this subject. In the first place I was astonished to hear that the early teaching of those gentlemen was against the operation in these cases. My early teaching was decidedly in favor of making iridectomy—a small iridectomy—just as we do in other cataracts. Cases in my own practice as well as in the practice of others have led me to be very careful about

making iridectomy in any of these cases unless I feel perfectly certain that there will be good vision—a good result. The results in some cases that I have seen of fine iridectomies—well made operations by the best of operators—resulted in no improvement of the vision, a fact which I do not quite understand. I am satisfied in all these cases, particularly in anterior polar cataract with lenticular astigmatism, that the astigmatism has to be taken into consideration when figuring on the result and if you are not satisfied that the operation will succeed it should not be attempted; but my practice has been instead to do away with the lens and I think that the results of this operation are eminently superior to the iridectomy for optical purposes in anterior polar cataract. I have had an opportunity in quite a number of cases in the Blind School to act in this manner, and also in my private practice and I do not think I have anything to regret. But I do regret that in a number of cases in which I performed the other operation, and which promised good results, no good result was obtained, and as I now believe, not because there was some other disease in the background, but in consequence of the astigmatism which was present. That in cases of anterior polar cataract we should have astigmatism is not to be wondered at. Here we have a crystaline lens, with a cone in front of its anterior pole or near it, included in the lens capsule. And there is another point in anterior polar cataract. I do not see how iritis could produce it unless we have to deal with something inside the lens capsule and this has been termed inflammation or inflammatory process. So far as I know, I have examined three cases, there was some new form of tissue in front of the real lens tissiue inside the lens capsule and in the new formed tissue there were deposits of lime. The manner in which that was formed is more guess work than anything else. When we have to deal with congenital and polar cataract, I believe it means some irregularity of development of the orriginal lens before the anterior chamber is formed. That anterior polar cataract does not happen in consequence of lesions of the crystal line lens I know from several cases in my own practice—I know I have seen anterior polar cataract in consequence of perforation of the cornea. I think the very fact that in most cases, as far as my experience goes, anterior polar cataract is binocular and not monocular shows that we have not to deal with perforation of the cornea.

Dr. Barck of St. Louis: My views are like those of Dr. Alt. I think only in the minority of cases of iridectomy will we get good results so far as vision is concerned, and among the reasons for this is that

in all the sections around the cone there is a very irregular portion of the anterior lens capsule and only the most peripherial portions are relatively smooth. This is the explanation in the large majority of cases, and the reason why there is no improvement from the iridectomy. Still I believe that in many of these cases iridectomy may be tried first, and if the result is not such as it should be the only proper procedure would be to the removal of the entire lens by one method or another.

Dr. Alt: In answer to Dr. Barck's remark I do not think it wise to first make a iridectomy first and, if no good results, make an operation for the removal of the lens, because after the iridectomy you have a maimed eye and are not in such a favorable situation for operation.

Dr. Wheeler: The remarks of Dr. Barck and Dr. Alt have recalled to my mind a case, not of anterior pyramidal cataract, in which I was requested to operate for optical purposes. I selected the site of operation downward and inward, but before I did the operation I secured a complete dilatation of the pupil and attempted by glasses to correct any possible ametropia, and succeeded in getting vision from $\frac{20}{200}$ to $\frac{20}{30}$, and upon that promise I advised an iridectomy and performed the operation very cleanly. I got a very nice result from an optical and mechanical standpoint, but I am very sorry to state when I came to adjust lenses I failed utterly in securing any useful vision. I believe that corneal astigmatism will stand in our way of success in most of these cases. At any rate whatever is done should be done very early in the life of the child.

Dr. Colburn: My experience with iridectomy has been rather limited, but I was so unfortunate as to have failed in getting good results from the operation. I have found that needling and destroying of the lens by absorption promised and gave me the best results, so that unless I am very sure of a good result I would not perform the operation. The Doctor making the last remarks sounds the keynote of our failure in giving a correction after we have made an iridectomy. We may get a theoretical correction before; when it comes to applying glasses and getting vision, I don't think we often accomplish it. My experience is fully in favor of the needling operation. I think if it is done early we will have relief; in later life we have to make the best of a bad matter. Within the last two years I have ripened the lens, after the Förster method, and then extracted, and I have had very good results.

Dr. Frank Allport, of Minneapolis, read a paper on **Mules' Operation for Artificial Eye.** The author recited a number of cases upon whom this operation had been performed and followed by marked success. The details of the operation are as follows: First, the ocular conjunctiva is freed from the sclera, from the cornea toward the equator of the eyeball. The cornea is removed with knife and scissors, and the contents of the globe scooped out, great pains being taken to thoroughly scrape the sclera, that no choroidal or uveal remnants remained to serve as a focus for subsequent irritation. The optic papilla is also scraped down to a level with the surrounding sclera, in order to do away with the danger of irritation by pressure of the glass globe upon the delicate nerve fibers. The slightly elevated scleral border at the sclero-corneal junction should be smoothed off, when the opening may be enlarged vertically, and the edges so trimmed that they will come together nicely after the sphere has been inserted. The hemorrhage is then stopped by means of hot bichloride tampons inserted into the scleral sac. After hemorrhage has ceased iodoform tampons are packed into cavity once or twice, after which the scleral surface will be smooth and dry, and ready for the insertion of a Mules' hollow glass globe, which should be of sufficient size to communicate motion to the artificial eye to be subsequently used, but small enough to allow for inevitable inflammation, swelling and shrinking which will surely follow. The sclera is now brought together vertically over the glass globe, with five or six interrupted sutures of silk or catgut; which are allowed to permanently remain. The conjunctiva is then sutured horizontally, which sutures are either removed in about a week or allowed to come out by themselves. A dressing of iodoform and cotton, kept saturated with an aseptic, antiphlogistic lotion, consisting chiefly of lead, opium and arnica, is then applied, and the patient required to rest quietly in bed. In about a month an artificial shell may be fitted. The appearance is natural; the eye has expression and good motion; the orbital cavity is well filled out, and the annoying and repulsive lachrymation noticed after other operations is not present, owing to the juxtaposition of the artificial eyeball and the puncta.

Dr. Flavel B. Tiffany, of Kansas City, read a paper on **Skin Grafting for Malignancy of the Orbit.** Several cases were reported wherein skin grafting was resorted to as a therapeutic agent in malignant growths. The surface of the malignant parts are first scrubbed with soap and water, afterwards with a solution of bichloride of mercury, 1 to 1,000. The parts from which the

graft is to be taken are also subjected to a thorough cleansing with soap and water, and then bathed with antiseptic solution. The malignant growth is removed, its bed or seat measured, and a corresponding measurement outlined upon the arm or chest from whence the graft is to be taken, and then the graft is cut about one-third larger than the dimensions of the cavity to be filled. It is transferred without handling immediately to its new abode where it is fixed in position by a few stitches of delicate silk which has been passed through bichloride solution. The true skin is excised down to the areolar tissue, taking care not to include any adipóse or connective tissue. All hemorrhage is staunched at the seat of the growth before the plant is transferred. After attaching the graft by delicate silk sutures, dry calomel powder is dusted on, covered with gauze and fastened with adhesive strips. The dressing is not disturbed for several days, when the sutures are removed. The piece soon grows red or takes on the color of the natural skin, occasionally it turns black but does not slough. In none of the cases where Dr. Tiffany has resorted to skin-grafting for cancer has there been any return of the malignancy.

Dr. Robt. M. Lapsley, of Keokuk, Iowa, read a paper on **College Instruction in Ophthalmology,** in which he described the present methods of teaching this department of medicine, and suggested that while didactic lectures should occupy an important place in the college curriculum, they should be displaced to a certain extent by recitations. Instruction should be given in the physiology and philosophy of the errors of refraction and their correction, and the use of the ophthalmoscope especially should be given more prominence, and, lastly, the student should become thoroughly familiar with clinical cases.

**Keratoconus,** by J. W. Bullard, M.D., of Pawnee City, Neb., is a comparatively rare disease. The reports of the Wills' Eye and Ear Hospital of Philadelphia for the years 1894 and 1895, out of a total of 26,470 cases of eye disease show only 40 cases of conical cornea. The report of the Royal London Ophthalmic Hospital, Moorfields, for 1895, shows a total of 28,474 eye cases, with only twelve cases operated upon. After a survey of the pathology, symptoms and course, it was stated that the true cause of the disease was represented by the unknown quantity whose real value had never yet been found. Every case of myopia should be carefully examined by retinoscopy for the first evidence of the disease, and if found all near work should be forbidden. Outdoor exercise, good hygiene, tonics, good food and

properly adjusted lenses should be provided. The affected eye should be carefully watched and kept under the influence of either eserin or pilocarpin, and a pressure bandage applied at night. Many operations have been devised: first, to stay the progress of the disease, second, to correct the deformity of the cornea, and, third, to establish an artificial pupil. He had recently operated on a severe case in a mildly insane young lady twenty-six years of age. The method adopted was by passing a narrow Graefe cataract knife horizontally through the apex of the cone, opening the interior chamber, grasping the upper lip of the wound with iris forceps and clipping off a piece. This was repeated in one week, the lower margin being removed. A pressure bandage was kept applied and the conjunctival sac flushed each day with boracic acid solution. When the wound was healed a one grain to the ounce solution of eserin was instilled into the eye three times a day. The result is a nearly normally covered cornea, but with a small central opacity which will necessitate an artificial pupil.

In a recent letter to the writer Prof. Snellen, of Utrecht, had described his latest treatment for conical cornea by means of black metallic plates with stenopaeic slits, running from left to right and ending in the middle with a sharp point. These enable the patient to read, if the point of the slit is brought just in the visual line. Prof. S. further applied dry bandages at night, alternately on left and right eye, and in progressive cases he did a series of small sclerotomies.

Dr. W. H. Baker, of Lynchburg, Va., reports a **Case of Mental Depression Apparently the Result of a Double Graduated Tenotomy,** the patient having 4° of esophoria which was not reduced by the operation. He complained of photophobia, although there were no abnormal ophthalmoscopic signs and no inflammation about the eye. Dr. Baker questions whether it would not be better in heterophorias of low degree to resort to prisms for constant wear in spite of the fact that many eminent oculists claim that they are of very little benefit and use them only for gymnastic purposes. Should not graduated tenotomy be a *dernier* instead of a primary resort, and should the operation be done in cases of heterophoria of less than 10°? And should not every legitimate treatment be tried in troubles of higher degree before resorting to the operation?

**Extraction of Soft Cataract in each Eye of a Child under Three Years of Age,** by John O. McReynolds, B. Sc., M. D., Dallas, Texas. In November, 1896, F. N., a child under three

years of age, was brought to me with both eyes blind from complete soft cataract that had existed for a period not definitely determined. His eyes had given him no pain, and there had been no history of any violent inflammation of the eyes or other serious illness, but the child was delicate and had never walked. Both pupils responded well to a mydriatic, and I decided not to perform a discission in accordance with the usual custom in such cases, but under general anæsthesia I made the operation of extraction on each eye, with an iridectomy on the right eye, and without an iridectomy on the left eye. The eyes were kept constantly bandaged for a few days, except when necessary to make the daily instillations of a mydriatic. No inflammatory trouble followed, and the child has secured useful vision, and with it the ability to walk with the aid of a chair which he pushes before him. A few remnants of the posterior capsule of each lens can be found upon ophthalmoscopic examination, but they are so situated as not to interfere with efficient transmission of light. The operation without the iridectomy, has in this instance, yielded rather the more satisfactory result, both as regards the outward appearance of the eye and the condition of the dioptric media. On account of the scanty literature on the subject I should be glad to hear the reports of similar cases from other members of the Association, in order that I may in the future profit by their experience.

J. Aloysius Mullen, M.D., Houston, Texas, presented a paper, **A Case of Inflammatory Glaucoma of Reflex Nasal Origin** in a woman forty-five years of age, who several hours before birth of her child seven years ago had an attack of severe pain in right eye, passing off after child was born. This was followed by ptosis and external squint of the same eye. Three months ago a similar attack of pain occurred in the same eye, and extending over the head. An oculist was consulted, who attempted an iridectomy for relief of the pain, but without success, as the symptoms increased in severity. On examination Dr. Mullen found plus tension, a dilated oval pupil with posterior synechiae and the lens rapidly undergoing opacification. Ptosis of right upper lid and external strabismus. The right nasal cavity showed enlarged middle turbinate, completely occluding the superior and middle meati. The removal of this hypertrophy resulted in complete cessation of pain and a return to normal tension.

**A Report of Two Cases of High Myopia, with Retinal Disturbances, Treated with Subconjunctival Injections of Bichloride**

**of Mercury,** by Francis B. Kellogg, M. D., Tacoma, Wash. The first case, a woman fifty-seven years of age, with 6.50 D. of myopia; had phosphenes and detachment of retina in left eye and phosphenes in right eye. Subconjunctival injection of bichloride (1-1000) were given once a week with marked relief of the symptoms. The solution was reduced in strength to 1-15000, which seemed to be equally effective. The left eye being blind, it was considered advisable to enucleate it on account of the sympathetic irritation in the right eye. Since that the latter has given very little trouble, the presence of the phosphenes being readily controlled by a single injection of the bichlochloride solution.

The second case, also a woman twenty years of age, having 9 D. of myopia and exophthalmic goitre. She had a posterior staphyloma and two small retinal hemorrhages in the macular region in the right eye; left in same condition, except the hemorrhages. She was given subconjunctival injections of bichloride (1-15000) twice a week, followed by marked improvement of vision and absorption of the hemorrhages.

**A New Trial Frame,** devised by J. H. McCassy, of Dayton, Ohio, was also shown.

Dr. John J. Kyle, of Marion, Ind., presented a paper, **Some Observations upon the Irritatng Effects of Natural Gas upon Trachoma,** calling attention in a general way to its effect upon the conjunctiva, yet more especially to its production of trachoma. He gave the area of the belt of natural gas in Indiana, as well as its chief characteristics, namely, combustibility and chemical destructibility, and also stated the effect of the gas-charged atmosphere upon instruments and articles of use. He reported that Marion is composed of a cosmopolitan population, and that while the immigrants from Belgium, France and Germany are comparatively free from this disease, the natives seem to be very susceptible. As for example, he stated that out of twenty-five cases of trachoma reported in 1896 all were native born. The disease is mostly seen in the winter season when coal is burnt, throwing out an irritating gas. While many physicians believe it is not a contagious disease, Dr. Kyle believes in the transportation from person to person.

As to treatment, he says five things must be taken into consideration:

1. Careful attention to drainage.

2. Removal of adenoid tissue by surgical methods.

3. Cleanliness and ventilation of sleeping apartments.

4. Careful washing of conjunctiva with sol. of bichloride (1-5000), followed by application of iodine solution, with massage as an adjunct.

5. The occasional use of cupri sulph. stick.

Dr. Corr: I dislike to take part in the discussion of this paper, and I was very much in hopes that somebody else would arise quickly and discuss it. I wish to endorse the sentiments of the paper so far as the "Gas belt" irritation is concerned. But I believe the doctrine that trachoma is a disease of its own kind and can be communicated from one to another is a heresy from beginning to end. I believe it originated purely in increased irritation or in inflammation, but that in no stage is it a disease of its own kind. It is a complicated condition growing out of an anatomical condition of the parts; and a simple so-called catarrh of the conjunction, or some irritation of that kind, gives rise to anatomical conditions of pathological character which gives us the idea of trachoma. I am aware that what I am saying is in the face of almost all the authorities in this country and in England, but I have not been able to say, from the clinical facts which have come to me, that the disease is a disease of its own kind, nor do I think it is of a contagious character. And this is what has led me to say it is a heresy. I think if we take another view of it we can account for the condition. The pathology, I think, can be accounted for on a widely different theory than that it is dependent on a microbe. I think the larger part of the so-called epidemics of this trouble are due to a condition of things entirely independent of the idea that it is contagious. The doctor referred to a whole family that had it. I have seen a number of them, and the strange point was that none of them had previously had any inflammation of the lids, *but* they all reported long standing irritation of the eye as a possible cause. Possibly, however, the trouble arises from some defect of ventilation in the sleeping apartments or something of a similar nature. I had seen the disease occur in an institution where there were a number of children occupying sleeping apartments that were very small. I think we can satisfactorily account for it in this and similar ways.

Dr. Rayley: I wish to say in regard to the histology and bacteriology of trachoma, that it is really due to a diplococus. Dr. Byron has made a number of cultures in Loomis labratory, and after making the cultures he inoculated patients and produced trachoma. All irri-

tating vapors and powders have a tendency to make trachoma worse; any irritating kind of food, as salt meat and highly seasoned food will agravate it. I have had a chance to find this out by sending cases, that were living in poor and badly ventilated apartments, to the hospital where they received good food and pure air and in a couple of weeks the disease had improved. To be sure they have not got well in three or four months treatment but they have greatly improved as soon as they got good food and pure air. About the treatment, this must be varied according to the condition or variety of the trachoma. In acute case, where there is a certain amount of muco-purulent discharge the best treatment is to apply a weak solution of nitrate of silver, say about five to ten grains to the ounce, then neutralize that with a salt solution. Apply that once a day and order some mild wash. We have one variety of trachoma which looks like follicular conjunctivitis, in which the granulations are very small, and the eyelids yellowish in color. For that variety the best treatment is to use tannic acid and glycerine, two drachms of the acid to the ounce of glycerine, applied once a day. Then the patient should apply to the eyes a weaker solution of ten grains to the ounce three times a day. I have succeeded in curing in three or four weeks cases of this form. In the cases where the granulations are soft and large we should use Knapp's forceps or the forceps of Dr. Noyes for the removal of the granulations. If the work is thoroughly and carefully done you will have little or no scar tissue. Another variety that is called trachoma but which is not really true trachoma, is due to a hypertrophic rhinitis in which we have a special form of granulations in the palpebral conjunctiva. For this form of the trouble the chief treatment is to remove the cause, which is the hypertrophic rhinitis.

Dr. Bulson: The diplococcus which causes this trouble no doubt exists, and so far but little progress has been made in destroying it. I have tried a method which has served me pretty well in many cases and that is the sub-mucous injection of a neutral salt solution. I have many cases in which there were repeated occurrences of the acute attacks. In that class of cases I find the sub-mucous injection or infiltration of the tissue by the neutral salt solution produces an extensive swelling of the mucosa and by painting this thoroughly with various solutions one gets a more complete effect of the medicine.

Dr. Bulson: I would like to ask Dr. Corr if I understand him to say that he does not think trachoma transmissible?

Dr. Corr: Not as trachoma.

Dr. Bulson: My experience has been so different from what the doctor says. It has been my experience that we can find what I call typical trachoma occurring directly by transmission. We have at Fort Wayne an Orphan Asylum in which there are confined 160 or 175 children. A child, dirty and filthy, with acute trachoma, was taken to that institution and not long afterwards four or five of the children (who are kept in a very cleanly condition, well fed, well clothed—the apartments light and airy) became infected with the disease. I informed the nurses that it would probably run through the school unless the utmost precaution was taken. They replied that they could not quarantine them and could not take care of them properly, as they had insufficient help. The consequence was that the trachoma did infect the school; we had 160 cases and I saw every one of them. This occurred, to my notion, directly from this one case introduced into the Asylum. I have only a few words to say in regard to the treatment. I am a strong advocate of the use of nitrate of silver, especially when there is an abundance of discharge. I use it in the strength of ten to twenty grains to the ounce, neutralizing it afterwards. I also use a solution of iodide of silver in the same manner. I think it has a less deleterious effect on the cornea than the nitrate, in fact it is said corneal ulcerations offer no objection to its use, but it serves best in acute trachoma. I consider the mixture, the formula of which was published in 1884, to be one of the best remedies that can be used, and I think ophthalmologists in general would appreciate it if they used it. It is made from two solutions, known as number one and number two, the first containing silver nitrate, glycerine and water; the second containing iodide of potassium, glycerine and water; two drops of the second solution being added to one of the first; a drachm of iodide of potassium and a drachm of nitrate of silver being used to the ounce. This produces, when mixed together, a yellowish solution. This is the solution I entrusted to the nurses of the institution I spoke of, and they used it without doing harm. The 160 cases were treated with it, and they all did well; the last of them are just recovering from it now. The epidemic began a year ago.

Dr. Knapp: I merely wish to state that it is an historical fact that after Napoleon's return from Egypt with his great army, many of the soldiers returned to their homes affected with an acute or chronic or subacute trachoma. The German physicians not understanding it, a great portion of the German Empire became affected with the disease which afterwards was known to be trachoma. This to my mind proves that the disease is transmissible.

Dr. Kyle: I have not much to say in conclusion. I think Dr. Corr is justifiable in taking the stand he does from the fact that we have not heard of the bacteriologists catching the trachoma bacillus. In the treatment there is a wide range, of course, and we must adapt the treatment to the case which seems suitable. I believe that the consensus of opinion is that the disease is transmissible.

[To Be Continued in the May Number.]

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At the last meeting of the Western Ophthalmological, Otological, Laryngological & Rhinological Association the following resolutions were adopted:

Whereas: We had heard with profound regret of the untimely death of our late confrere, Dr. W. C. Pipino at his home in Des Moines, Ia., last summer. Therefore be it resolved that our society, realizing the great loss that we have sustained, desire to express in appropriate manner our appreciation of his worth as a member of our profession and society.

*Resolved:* That these resolutions be engrossed upon our society record and a copy furnished the Medical Journals representing our society for publication.

J. D. C. Hoit,
Flavel B. Tiffany,
Committee.

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The editors of the Record announce that, owing to the large amount of original matter submitted for publication, it is impossible for them to guarantee the appearance of articles, however meritorious, within two or three months after their receipt. They fully expect, in the next volume, to enlarge the space devoted to original contributions. In the meantime they ask the kind indulgence of contributors.

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## ABOUT THE TRIP TO MOSCOW.

We would advise any of our readers who contemplate attending the August meeting of the International Medical Congress at Moscow to send for a circular descriptive of a special tour, under the auspices of a number of well known members of the profession. The excursion is managed by Messrs. Thos. Cook & Son.

## A NEW KIND OF HEADACHE.

Another malady has been discovered by the faculty. It takes the form of "academy headache." This is not meant as an excuse for boys who attend seats of learning dignified with the name neglecting their lessons, but is an inconvenience which afflicts those who study high art, not high in an æsthetic sense, but high up on the walls,—skied, in fact. The credit of diagnosing this malady is due to a Sheffield oculist.

He has discovered that when, as at the Royal Academy, it is necessary to direct the eyes considerably above the horizontal line a number of times, a great strain is thrown upon the muscles which rotate the eye upward, as well as upon the elevators of the upper eyelids, which have, of course, to be correspondingly raised to accommodate the eyeball. This being so, "it is time that those who are responsible for the distribution of the pictures in galleries should recognize the fact that the human eye is not constructed for looking upward for any length of time, and if considerations of space oblige the whole of the available wall-area to be utilized, the higher pictures should be tiltad at a suitable angle in order to minimize the strain on the eye-muscles.

The people who at religious meetings and at street-corners are so fond of turning up their eyes when patronizing the Creator should take warning from this discovery, even though it does come from Sheffield, and keep their orbits either fixed horizontally or turned in a downward direction. Among ladies "academy headache" may become really useful as an excuse for light refreshment.—*London Telegraph.*

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## THE ROENTGEN RAY.

Dr. E. Bock suggests in *Memorabilien* for February that if letters are painted on a sheet of cardboard, afterward varnished and dusted with powdered metal, or the letters are made as gold leaf is applied, the Roentgen ray will throw their shadow through the opaque cornea of the blind, and if the optic nerve is still sound, the blind person will see the shadowgraph thrown on the retina. He urges experts to experiment in this line with persons who have lost their sight from opacity of the cornea, etc., and quotes Professor Eder of Vienna, as authority for its feasibility.

THE
# OPHTHALMIC RECORD

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## EDITORIALS.

### SUBCONJUNCTIVAL HEMORRHAGE AS A SYMPTOM OF CHRONIC NEPHRITIS.

That iritis with hyphæma, retinal hemorrhage, retinitis, or papillo-retinitis may be the first symptom which calls attention to a chronic nephritis is well-known. That subconjunctival hemorrhages, recurring spontaneously, may play the same role is equally true, although it is doubtful if they have received the place which they deserve among the ocular signs of so-called Bright's disease. Occasionally writers, for example, Talko (quoted by Knies), D. B. St. John Roosa and Frank Ring, have called attention to this matter; but more commonly text-books, both on general and special medicine, when describing nephritis are silent with reference to this symptom, although other hemorrhagic phenomena — epistaxis, purpura and retinal extravasations — are duly considered and described.

In the writer's experience these subconjunctival ecchymoses have been associated with contracted kidney and general arterio-sclerosis, and have occurred in persons past middle life and usually during sleep, the patient being surprised on waking in the morning to find a more or less extensive subconjunctival extravasation. In one case they may recur at comparatively short intervals, in another the periods between the attacks may comprise several weeks or even months.

What the relative frequency of these subconjunctival hemorrhages is, compared with the other more commonly described ocular manifestations of nephritic origin, is not apparent owing to insufficient data. According to Knies, they may be associated with retinitis albumin-

urica, but in the writer's experience this association has been wanting. Perhaps, in a certain sense, they may at times replace the retinal lesions of chronic nephritis; certainly they may precede them.

If this association of Bright's disease and recurring subconjunctival hemorrhages is a matter of common observation, as, indeed, it well may be, at least the fact has not been sufficiently emphasized, and the simple rule to examine the urine carefully in each case of subconjunctival ecchymosis, occurring without evident reason, may lead to the discovery of a serious renal disorder, which, as William Osler has said, is frequently latent and even in an advanced grade may be compatible with great mental and bodily vigor. G. E. de S.

## ASTHENOPIA NOT DUE TO REFRACTIVE ERRORS.

In late years refractive errors as a frequent cause of eye discomfort and headache have occupied so prominent a place that for some ophthalmologists there seems to exist no other conditions capable of producing similar complaints. Refraction work fills their whole mind, and spectacles are their panacea for asthenopia. So great is their faith in the efficacy of the most subtle correction that a quarter dioptry more or less will in their opinion produce wonderful results and they expect a +1.75 will relieve asthenopic symptoms upon which a +1.50 previously prescribed had no influence whatever. This is no fancy but an actual fact.

The writer does not wish to belittle the importance of careful refraction work; on the contrary he himself insists upon the greatest accuracy in this work and maintains that by the painstaking minuteness observed in the adjustment of glasses we get far better results than our European confreres. But there is an unmistakable tendency to go too far and to overrate the importance of refraction work.

A visit to our post graduate schools furnishes unmistakable proofs of this tendency. The students flock around the ophthalmometer like flies around a honey-dish; that instrument seems to have a greater fascination than operations, and the test case seems to interest them more than the most important diseases. Refraction work seems to be their *alpha and omega*: the fitting of glasses, their chief object.

It is time that teachers of clinical ophthalmology should again and again impress upon their hearers the fact that asthenopic complaints are not the exclusive product of anomalous refraction.

It is time to bear in mind that mild forms of blepharitis and con-

junctivitis, slight disturbances of the choroid and other local conditions may cause the same discomfort in near work as slight refractive errors and deserve the same careful attention. It is time to call attention to the influence the general state of health has upon the working capacity of the eyes: that the most perfect eye cannot endure much work if its possessor is a neurasthenic or a physical bankrupt.

In fact it is time to insist that we should always act as ophthalmologists and not merely as refractionists. F. C. H.

## THE OCULIST AS A SANITARY OFFICER.

In this epoch of preventive medicine, the oculist has become somewhat in evidence, especially as regards school and asylum hygiene. With this exception, since alarming epidemics of eye disease are now happily rare, little demand is made upon him in the interests of the public.

The public nevertheless requires so much instruction concerning ocular hygiene outside the school-room, and the protection of laws and ordinances to that effect, that every state and municipal board of health should include among its members one or more reputable oculists.

As an instance, the retinal and ciliary irritation caused by the Welsbach incandescent light, needs at least public expression, that it may be excluded from factories, banks, counting-rooms, residences, etc., or its chemical nature modified by transmission through tinted glasses of proper color. Builders of public and commercial buildings should be required to provide adequate window and artificial illumination, defined photometrically.

It goes without saying that the eyes of thousands of factory hands, clerks, and other employees should be examined as are those of school children, soldiers, sailors and railway men.

In short, public ocular hygiene is needed for the prevention rather of the deeper insidious affections — of retina and choroid — than for the superficial and more palpable ones. F. B. E.

## OBITUARY.

Peter Direk Keyser, A. M., M. D., formerly professor of ophthalmology and dean of the faculty of the Medico-Chirurgical College of Philadelphia, died of pneumonia, on the 9th inst., at his home, 1832 Arch Street, Philadelphia. Dr. Keyser was born in Philadelphia, Feb.

8, 1835, of German Lutheran parentage. In 1852 he was graduated from Delaware College with the degree in arts. He then especially devoted himself to chemistry working in the labratory of Dr. F. A. Genth, city chemist of Philadelphia, for two years. He continued his studies in Germany and returned to this country in 1858. In 1861 he entered the army as captain of 91st Regt. Penn. Infantry, U. S. V., and served in the Army of the Potomac in the Chickahominy campaign. Owing to wounds and ill health, he found himself obliged to retire from active service and he resigned his commission August, 1862. He again visited Europe and 1864 received the degree of M. D. from the University of Jena, and subsequently attended the clinical instruction in the Hospitals of Berlin, Paris and London. On his return to the United States he was appointed acting assistant surgeon to the U. S. Army Hospital at Germantown, Pa. He entered upon private practice in 1865, when he finally retired from military service. He founded the Philadelphia Eye and Ear Infirmary in 1864 and delivered a series of clinical lectures to physicians upon accommodation and refraction, in 1868, and two years later began a regular series of lectures upon clinical ophthalmology. He was one of the surgeons of the Wills' Eye Hospital for a period of more than twenty years. He occupied the chair of ophthalmology in the Medico-Chirurgical College for ten years, resigning on May 7, 1893; during a great part of this period he had been the dean of the faculty. In 1889, Dr. Keyser was appointed a member of the Philadelphia Board of Health, and rendered such efficient service that he continued to hold the position up to the time of his death. The Board of Health on learning of his death, adjourned for the day and passed appropriate resolutions. The Trustees and Faculty and the Alumni Association of the Medico-Chirurgical College held special meetings and also adopted resolutions of regret and condolence. Dr. Keyser was a companion of the Loyal Legion of the United States and was one of the founders of this successful patriotic and military organization. He was a member of the American Medical Association, the Academy of Medicine, Philadelphia County Medical Society, and also honorary member of the Delaware State Medical Society. He was vice-president of the Ophthalmological Section of the Ninth International Congress in 1887 and also of the Tenth Congress in 1890. Dr. Keyser contributed a number of articles to current medical literature, relating to the disease of the eye and refraction, and was the originator of a clinical ophthalmoscope which bears his name. His wife and daughter survive him—*Journal A. M. A.*

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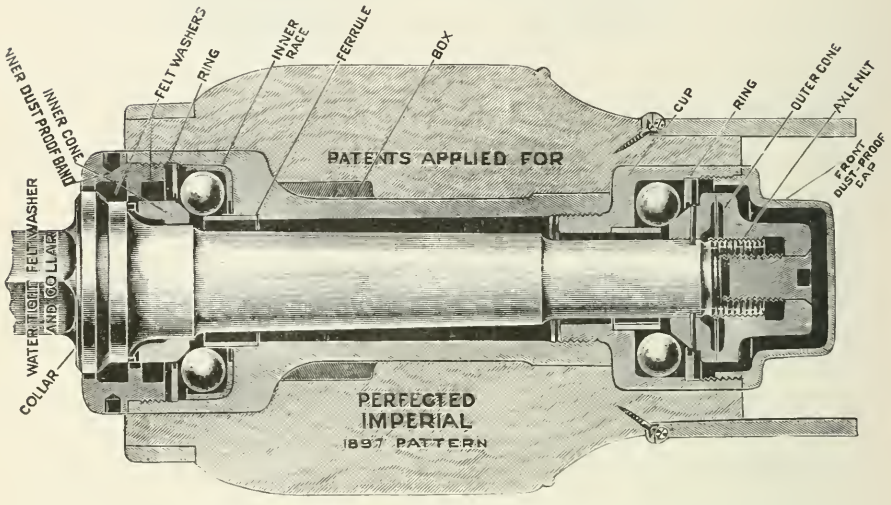


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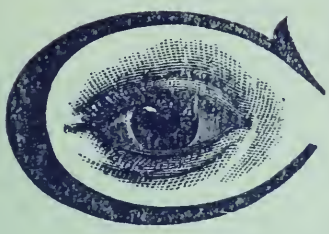

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